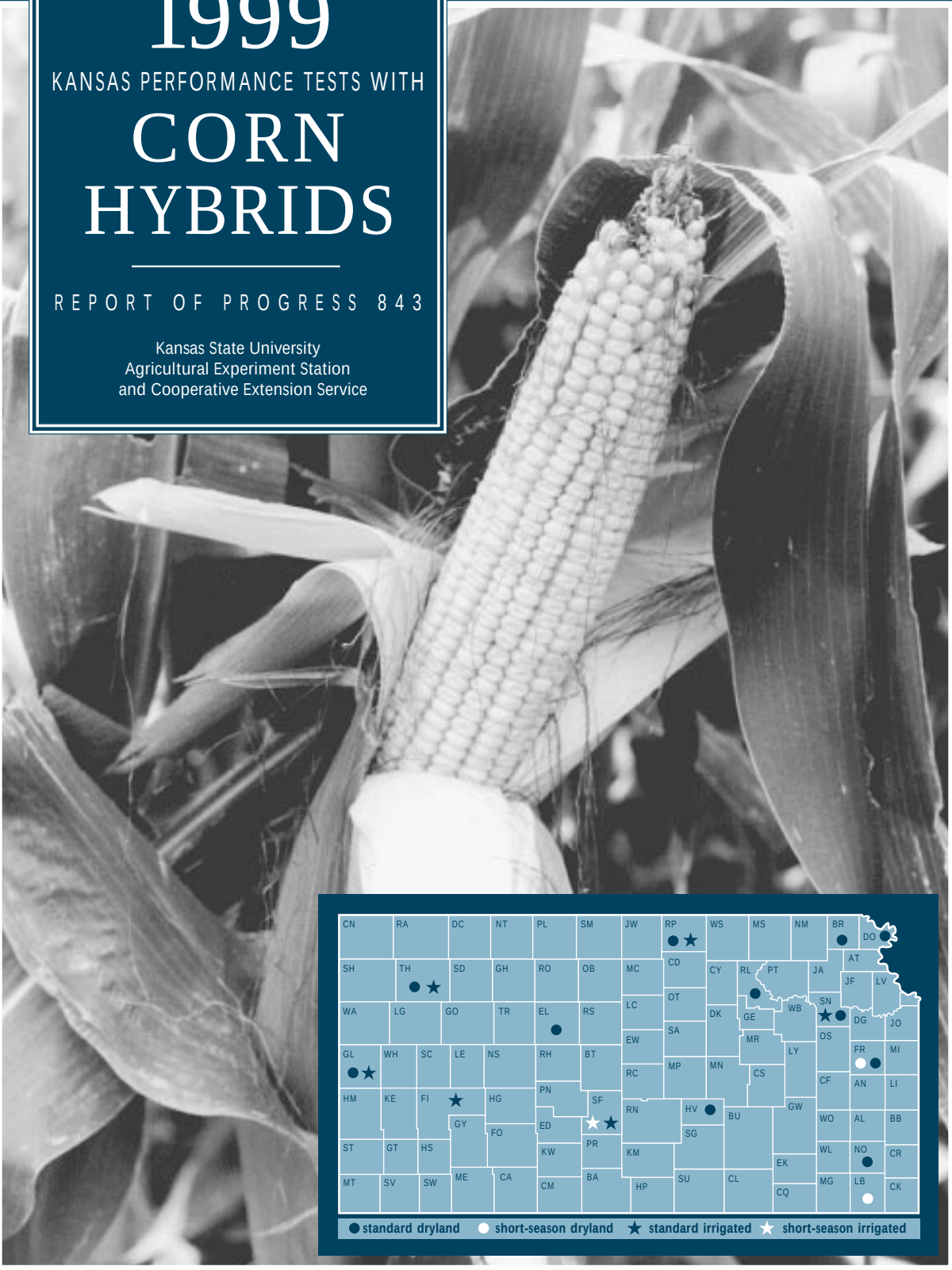
1999

KANSAS PERFORMANCE TESTS WITH CORN HYBRIDS

REPORT OF PROGRESS 843

Kansas State University
Agricultural Experiment Station
and Cooperative Extension Service



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Contribution No. 00-169-S from the Kansas Agricultural Experiment Station.

1999 KANSAS CORN PERFORMANCE TESTS

INTRODUCTION

TEST OBJECTIVES AND PROCEDURES

Corn Performance Tests, conducted annually by the Kansas Agricultural Experiment Station, provide farmers, extension workers, and private research and sales personnel with unbiased agronomic information on many of the corn hybrids marketed in the state. Entry fees from private seed companies help finance the tests. Seed companies receive test announcements and entry forms in late January each year; deadlines for receipt of completed entry forms and seed are in early March. 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.

Short-season corn performance tests are similar to the full-season tests, except where noted. This series of tests targets evaluation of corn hybrids for use in early-planted, short-season, cropping systems. Hybrids with adequate heat and drought tolerance are needed for these systems. These hybrids often will be subjected to severe heat and drought stress in July and August. These systems typically are utilized on soils with poor water-holding capacities. Early-maturing hybrids often are able to escape a good portion of the typical stress if they can be planted early. Utilization of short-season hybrids under irrigation often is related to the desire to reduce irrigation inputs or to facilitate specific crop rotations.

A summary of growing-season weather data is given in individual test discussions. These data are from the nearest weather-reporting station and often are supplemented with information from the test site. Precipitation graphs include cumulative lines for 1999 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. Growing degree graphs include cumulative lines for 1999 and normal. All graphs include vertical lines indicating planting, silking, and harvest dates, if available. General trends in precipitation and temperature relative to normal are readily observed in the graphs. For more detailed information, a table is included with monthly totals and averages for the growing season.

CORN BORER status of a representative susceptible hybrid is listed with the other descriptive information preceding each table. The listed infestation rates and tunnel lengths may not represent the actual extent of damage if the sampling date precedes harvest by several weeks, but it does provide an indication of the level of corn borer infestation at a given location.

Explanatory information is given preceding data summaries for each test. Tables 1-21 contain results from the standard corn performance tests. Hybrids are listed in order of increasing days to half silk and increasing grain moisture for the current year so hybrids of similar maturity appear together. Yield summaries following each group of tests (Tables 5, 8, 13, 17, 21) present yield as a percent of the average for each location and summarize hybrid performance over the past few years in that region. Tables 22-24 contain results from the short-season tests. The 1999 entrants and entries are listed in the Appendixes.

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

Tractor-powered, modified, White air-planters were used for nearly all tests. Four plots (replications) of each hybrid were grown at each location in a randomized complete block design. Four-row plots were used in the west no-till tests. Each harvested plot consisted of two rows trimmed to a specific length ranging from 20 to 30 feet at the different locations. Tests were harvested with specialized plot combines equipped with automatic weighing and sampling devices.

GRAIN YIELDS are reported as bushels per acre of shelled grain (56 lbs/bu) adjusted to a moisture content of 15.5%. *BUSHEL YIELDS* are given but

also are converted to *YIELDS AS PERCENTAGES OF THE TEST AVERAGE* to speed recognition of highest-yielding hybrids (more than 100%, the test average). The actual test average in bushels per acre is listed as the test average in the YIELD AS % OF TEST AVERAGE columns as a guide to actual yields. Hybrids yielding more than 100% of the test average year after year merit consideration, but adaptation to individual farms for appropriate maturity, stalk strength, and other factors also must be considered.

The number of *LODGED EARS* is reported, when appropriate. Plants broken over below the ear and dropped ears were considered *LODGED*, although many were harvestable with modern machinery. Severely lodged stalks or dropped ears that could not be picked up by normal harvest procedures are not included in yield. Because harvest often is delayed until latest maturing entries are ripe, early and mid- season hybrids could 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.

Relative maturity is measured in terms of both *NUMBER OF DAYS FROM PLANTING TO SILKING* and *GRAIN MOISTURE AT HARVEST* at most locations. Entries are listed in order of increasing maturity based on days to silking and harvest moisture in the current year to facilitate comparison of hybrids of like maturity. Maturity can be critical when considering a corn hybrid for a specific cropping system.

The *GROWTH UNIT* or *GROWING DEGREE DAY* concept was developed to measure the amount of heat available for growth and maturation. The formula used to generate the monthly totals in individual test discussions follows: Take the maximum temperature plus the minimum temperature for each day, divide by 2, and then subtract a base temperature of 50 each day. Any temperature below 50°F was considered to be 50, and any temperature over 86°F was called 86. Growth unit accumulations for the current year are compared with the long-term average or 'normal' for each test.

Small differences in yield or other characteristics should not be overemphasized. Least significant differences (LSD's) are shown at the bottom of each table. Unless two entries differ by at least the LSD shown, little confidence can be placed in one being superior to the other. The coefficient of variability (CV) can be used to estimate the degree of confidence one may have in published data from replicated tests. In this testing program, CV's below 10% generally indicate reliable, uniform data, whereas CV's of 10 to 15% are not uncommon and usually indicate that data are acceptable for the rough performance comparisons desired from these tests. Tests with CV's over 15% still may be useful, but hybrid comparisons lack precision.

1999 STATEWIDE GROWING CONDITIONS

Although temperatures tended to follow a typical pattern during the 1999 season (Figure 1), some deviations are worth noting for their effects on the corn crop. Temperatures remained relatively cool well into June, slowing early growth. An extended period of high temperatures began in late July and continued into early-mid September. Although not unusual for this time of year, this period of high temperatures was fairly long. At least one reporting station in Kansas recorded temperatures near or above 100°F for 12 consecutive weeks. This period largely coincided with the reproductive portion of the corn growth cycle from tasseling through grain fill and maturation. Maximum temperatures in the fall remained above 80°F, but minimum temperatures dropped below freezing at several locations.

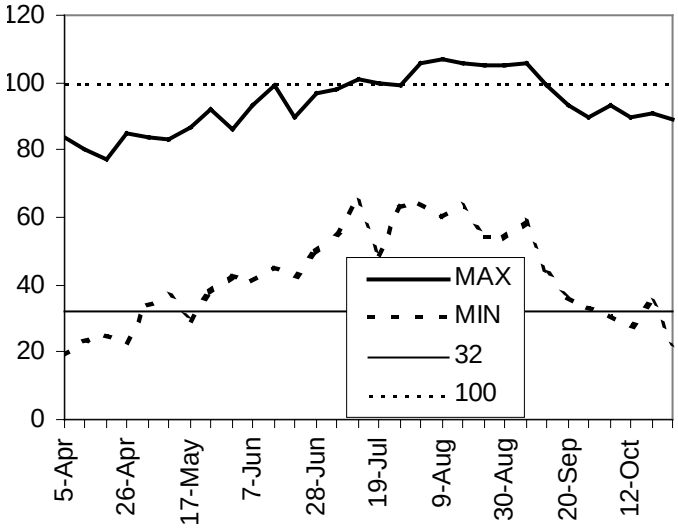


Figure 1. 1999 Kansas weekly maximum and minimum temperatures.

Figure 2 illustrates status of statewide topsoil moisture, which closely mirrors precipitation and has a large effect on crop growth. Moisture patterns closely parallel temperature trends. The cool spring and early-summer temperatures were accompanied by wet soil conditions. The east-central and southeastern regions were especially wet during this time period. From mid-July on, soil moisture was less abundant across the state. Combined with the high temperatures prevalent during this period, the lower soil moisture status caused significant stress to much of the crop and accelerated crop development.

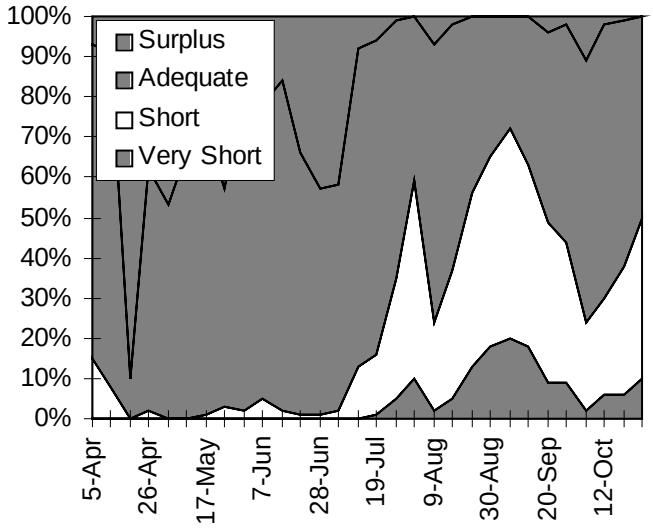


Figure 2. Statewide status of topsoil moisture.

Early in the season, condition of the crop was lowered by the cool and extremely wet weather.

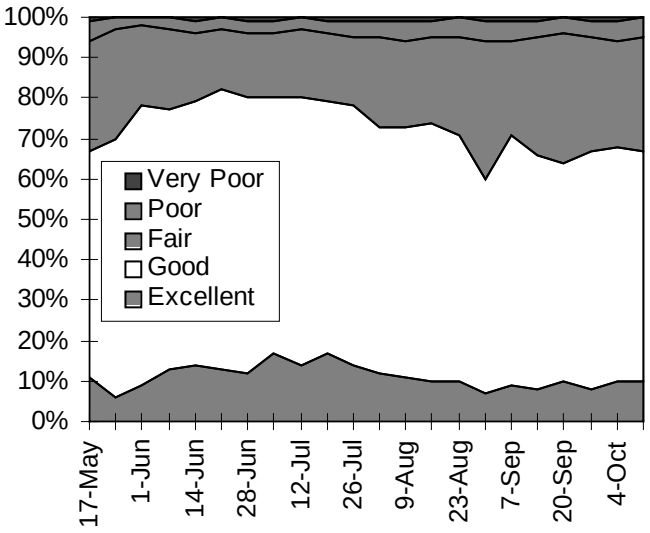


Figure 3. Condition of 1999 Kansas corn crop.

Crop condition generally improved until early July, when the extended period of hot, dry weather began. The condition of the corn crop gradually declined from early July until late August, when it stabilized with roughly 70% of the crop rated good or excellent (Figure 3).

The wet spring delayed planting roughly 2 weeks behind 1998 planting and 1 week behind average. The crop was still behind average during most of the silking period. However, as the temperatures increased in July, the crop eventually caught up with the 5-year average. Harvest closely tracked the average but was several days later than the 1998 harvest. (From Crop-Weather reports, Kansas Agricultural Statistics, Topeka).

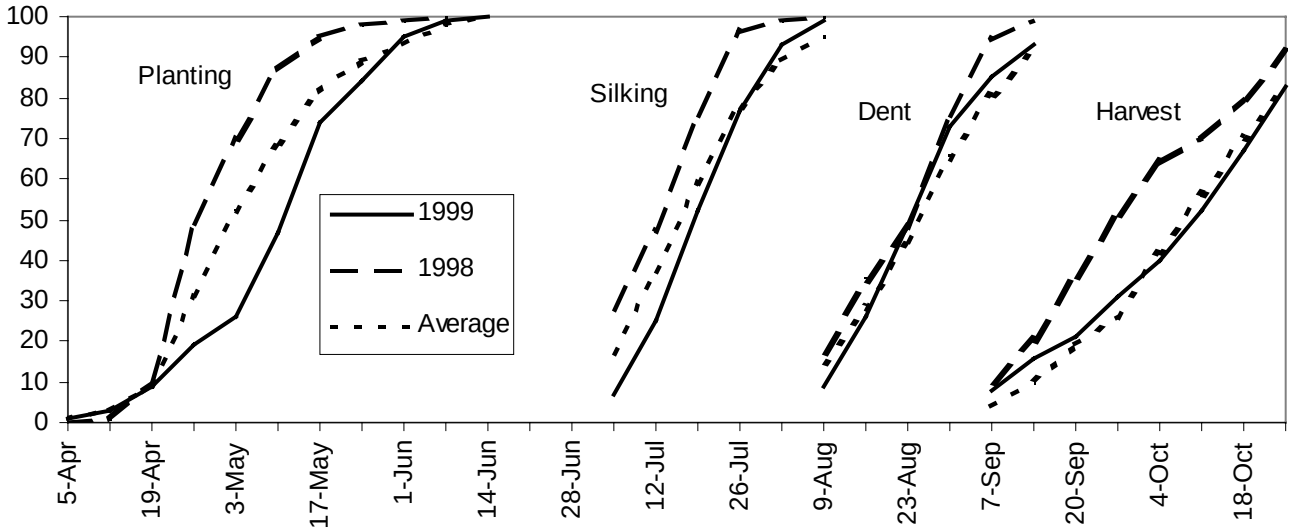


Figure 4. Progress of 1999 Kansas corn crop.

The typical array of insect pests appeared in Kansas corn fields in 1999. For the third consecutive year, southern corn leaf beetle appeared at or near economic levels in northeast and north central fields. This follows an 80-year period when this pest was not detected at levels high enough to cause economically significant damage.

Presence of both European and southwestern corn borers required insecticide treatment of many acres, especially in south central and southwestern Kansas. Entomologists noted that increasing acres of Bt corn hybrids often resulted in reports of low population numbers for these pests, but fields of susceptible hybrids still supported high borer numbers.

Several other insects caused damage or concern in various parts of the state throughout the season. Southern corn rootworm was found in eastern Kansas at light levels in May and in southern Kansas in June. Spider mites maintained low numbers in southwestern corn fields until dry conditions stimulated increased numbers in late July and August. Grasshoppers stripped the leaves from plants at field edges in July. (From Kansas Insect Newsletter, Extension Entomology, Kansas State University and Kansas Cooperative Economic Insect Survey Reports, Kansas Department of Agriculture.)

Above-average rainfalls in April, May, and June in many parts of the state resulted in above-normal stand establishment problems from various seedling blight diseases, especially *Pythium*. The wet weather also caused an early-season buildup of gray leaf spot in areas where the disease has traditionally been a problem. By tasseling, many fields were at or above threshold levels for treatment. In most areas of the state, however, significant losses to gray leaf spot did not develop because of the extended dry weather in July and August.

Many Kansas corn fields planted to susceptible hybrids developed epidemic levels of southern rust in 1999. This disease is only occasionally a problem in Kansas, because it does not overwinter in the state. It often is confused with common corn rust, which is more prevalent but causes little yield loss. The early arrival of southern rust on the numerous storm fronts from the south, combined with delayed planting, resulted in the most serious yield losses since 1993.

Extended drought in July and August resulted in the development of Aspergillus ear rot as far north as Manhattan in eastern Kansas. This disease is usually confined to the southeastern area of the state. *Aspergillus flavus*, the cause of the disease, is the fungus that produces aflatoxin. Some corn was refused at elevators because of *Aspergillus* contamination. Levels of aflatoxin in infested corn were generally less than 300 parts per billion, however, which is the upper limit for use as cattle feed.

There were late-season reports of several stalk-rotting diseases including Fusarium, Gibberella, anthracnose, and charcoal rot. Disease levels and yield losses were generally consistent with long-term averages. (From Doug Jardine, Extension Plant Pathologist, Kansas State University Department of Plant Pathology.)

The October 8 Crops Report predicted a 397.6 million bushel crop, down 5% from last year's record crop. This production is from 2.8 million harvested acres, down 2% from last year. The predicted average yield of 142 bushels per acre is 2 bushels below that in 1998. (From Kansas Agricultural Statistics.)

NORTHEASTERN KANSAS STANDARD CORN TEST ON SILT LOAM SOIL

COUNTY: DONIPHAN

LOCATION: Private farm 1 mile north of Severance

TEST SITE: Manona silt loam

1998 CROP: Soybean

1997 CROP: Corn

FERTILIZER (lbs/acre): 150 N 0 P_2O_5 0 K_2O

PLANTING DATE: 5/1/99

HARVEST DATE: 9/21/99

COOPERATORS:

Fuhrman Farms, Inc.

TARGET POPULATION: 25,000 plants/acre, 8.4 in. spacing

FINAL STAND (% of target): 107

SILK DATES: 7/15/99 - 7/18/99

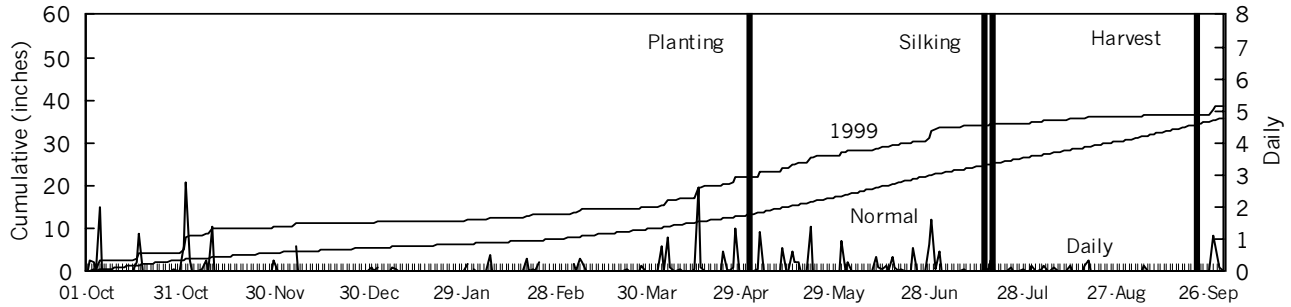
YIELD: **Avg. (bu/a):** 173 **Range (bu/a):** 144 - 196
LSD (bu/a): 16 **CV (%):** 8

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	35	--	0.8	9/9/99

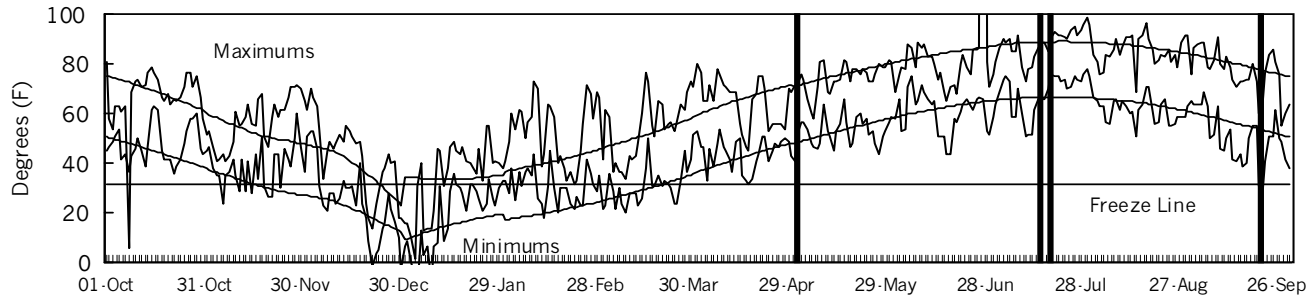
1999 GROWING CONDITONS:

Planting was delayed by wet weather. Good stands and favorable early-season growth set the stage for high yields. However, low rainfall later in the season may have decreased final yields. European corn borers were present in susceptible hybrids but caused minimal lodging or dropped ears at harvest.

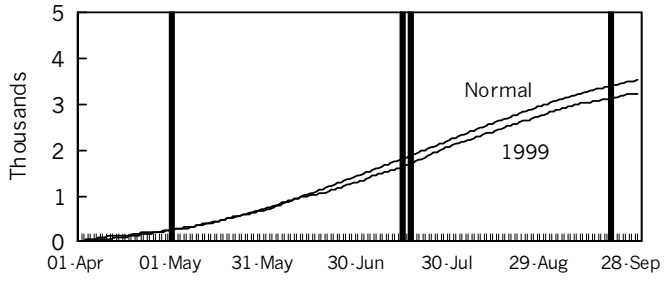
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	7.2	3.3	55	55	235	255
May	5.8	4.4	64	65	447	453
June	5.3	5.2	80	74	599	726
July	1.8	4.1	78	78	811	841
August	1.4	3.8	73	76	692	748
Sept.	2.4	4.9	63	68	454	532
Season Totals	23.7	25.7	69	69	3237	3555

TABLE 1. DONIPHAN CO. CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	144	160	170	152	158	83	72	95	76	15	75	15	111	0	55
MATURITY CHECK	MID-H-2530	160	196	180	178	178	92	88	101	77	15	76	16	111	0	56
DEKALB	DK626Bty	178	--	--	--	--	102	--	--	--	--	76	17	102	0	56
DEKALB	DK611	182	--	--	--	--	105	--	--	--	--	76	18	106	0	58
HOEGEMEYER	2668	175	--	--	--	--	101	--	--	--	--	76	18	90	0	55
NC+	4880	169	220	--	194	--	97	99	--	77	17	76	18	105	0	55
PIONEER	33R87	172	233	--	202	--	99	105	--	77	17	76	18	106	0	60
PSA	7727	156	223	--	189	--	90	101	--	77	17	76	18	101	0	55
AGSOURCE	6212	174	--	--	--	--	100	--	--	--	--	76	19	103	0	57
CARGILL	6888	161	--	187	--	--	93	--	105	--	--	76	19	94	0	54
LEWIS	6578RR	178	--	--	--	--	102	--	--	--	--	76	19	100	0	56
MATURITY CHECK	PIONEER 3162	160	203	157	182	173	92	92	88	77	18	76	19	106	0	58
PIONEER	33G26	159	--	--	--	--	92	--	--	--	--	76	19	105	0	57
CARGILL	7770	167	242	170	204	193	96	109	96	77	18	76	20	113	0	55
LEWIS	6281Bt	183	--	--	--	--	105	--	--	--	--	76	20	111	0	56
MSG	G 8699	179	--	--	--	--	103	--	--	--	--	76	20	110	0	55
PIONEER	33P66	174	--	--	--	--	100	--	--	--	--	76	20	97	0	57
PIONEER	32K61	164	238	198	201	200	94	108	111	77	18	76	20	107	0	59
PSA	4700Bt	181	254	--	218	--	104	115	--	77	18	76	20	110	0	56
ASGROW	RX799Bt	188	--	--	--	--	108	--	--	--	--	76	21	108	0	55
HAWKEYE	6939BT	170	--	--	--	--	98	--	--	--	--	76	21	112	0	56
MSG	G 8758Bt	176	--	--	--	--	102	--	--	--	--	76	21	110	0	55
MYCOGEN	2888IMI	170	--	--	--	--	98	--	--	--	--	76	21	105	0	55
NC+	5878B	178	--	--	--	--	103	--	--	--	--	76	21	114	0	56
NK	N79-L3	166	243	--	205	--	96	110	--	77	19	76	21	94	0	59
RENZE	8418BT	174	238	--	206	--	100	108	--	77	19	76	21	114	0	55
WILSON	1861Bt	193	--	--	--	--	112	--	--	--	--	76	21	105	0	55
FONTANELLE	HC7766Bt	167	--	--	--	--	96	--	--	--	--	77	17	107	0	55
FREEDOM	5503	162	--	--	--	--	93	--	--	--	--	77	17	116	0	55
AGSOURCE	EXP9114	183	--	--	--	--	106	--	--	--	--	77	18	108	0	55
ASGROW	RX730YG	170	--	--	--	--	98	--	--	--	--	77	18	101	0	55
ASGROW	RX740	178	--	--	--	--	103	--	--	--	--	77	18	103	0	58
MYCOGEN	2725	156	219	184	188	187	90	99	103	78	17	77	18	105	0	55
NC+	5018	196	--	--	--	--	113	--	--	--	--	77	18	112	0	55
NET	1105	172	--	--	--	--	99	--	--	--	--	77	18	105	0	55
DEKALB	DK647Bty	184	--	--	--	--	106	--	--	--	--	77	19	113	0	54
GARST	8366Bt/LL	170	--	--	--	--	98	--	--	--	--	77	19	112	0	54
HAWKEYE	SX76	177	216	--	196	--	102	98	--	78	17	77	19	113	0	55
HOEGEMEYER	2683	183	--	--	--	--	105	--	--	--	--	77	19	110	0	56
LEWIS	5559	178	--	--	--	--	103	--	--	--	--	77	19	108	0	51
MIDLAND	774	168	232	--	200	--	97	105	--	78	17	77	19	109	0	54
PFISTER	3049	168	228	174	198	190	97	103	98	78	17	77	19	103	0	52

(continued)

TABLE 1. DONIPHAN CO. CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
PFISTER	2652	186	221	173	204	193	107	100	97	78	17	77	19	114	0	54
GARST	8342GLS/IT	177	--	--	--	--	102	--	--	--	--	77	20	108	0	54
HAWKEYE	9191	175	--	--	--	--	101	--	--	--	--	77	20	103	0	55
HOEGEMEYER	2693	158	214	193	186	188	91	97	108	78	18	77	20	110	0	57
NK	N7639BT	168	224	--	196	--	97	101	--	78	18	77	20	98	0	55
PSA	7864	167	251	--	209	--	96	114	--	78	18	77	20	116	0	53
PSA	7793IM	158	--	--	--	--	91	--	--	--	--	77	20	111	0	55
RENZE	6469	181	--	--	--	--	104	--	--	--	--	77	20	115	0	55
AGSOURCE	EXP9116	169	--	--	--	--	97	--	--	--	--	77	21	107	0	53
ASGROW	RX889	178	--	--	--	--	103	--	--	--	--	77	21	103	0	54
FONTANELLE	HC7879Bt	182	--	--	--	--	105	--	--	--	--	77	21	117	0	55
FRONTIER	F3175	177	--	--	--	--	102	--	--	--	--	77	21	104	0	55
FRONTIER	F3200	184	--	--	--	--	106	--	--	--	--	77	21	104	0	54
LEWIS	8268	175	249	--	212	--	101	113	--	78	19	77	21	103	0	54
MIDLAND	786	179	241	176	210	199	103	109	99	77	19	77	21	110	0	52
PFISTER	3977	186	237	--	211	--	107	107	--	77	19	77	21	105	0	53
AGSOURCE	7890	180	--	--	--	--	104	--	--	--	--	77	22	112	0	54
ASGROW	RX897IMI	171	--	--	--	--	99	--	--	--	--	77	22	101	0	53
CARGILL	8412	179	217	--	198	--	103	98	--	78	20	77	22	94	0	55
FREEDOM	5680	169	247	171	208	196	98	112	96	78	19	77	22	107	0	51
MSG	G 8795	187	--	--	--	--	108	--	--	--	--	77	22	108	0	55
NC+	6868	173	--	--	--	--	100	--	--	--	--	78	21	109	0	53
PFISTER	3321	167	--	--	--	--	96	--	--	--	--	78	21	106	0	55
RENZE	6480	164	--	--	--	--	95	--	--	--	--	78	21	110	0	54
NET	1177	170	--	--	--	--	98	--	--	--	--	78	22	105	0	53
WILSON	2335	175	236	184	205	198	101	107	103	78	21	78	23	113	0	52
WILSON	2330	192	239	177	215	203	111	108	100	79	21	78	23	113	0	52
AVERAGES		173	221	178	197	191	173	221	178	78	18	77	20	107	0	55
CV (%)		8	8	9	--	--	8	8	9	--	--	1	3	8	0	2
LSD (0.05)**		16	19	19	--	--	9	9	11	--	--	1	1	10	0	1

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

NORTHEASTERN KANSAS STANDARD CORN TEST ON SILTY CLAY LOAM SOIL

COUNTY: BROWN

LOCATION: Cornbelt Experiment Field, Powhattan

TEST SITE: Grundy silty clay loam

1998 CROP: Soybean

1997 CROP: Corn

FERTILIZER (lbs/acre): 110 N 0 P_2O_5 0 K_2O

PLANTING DATE: 5/19/99

HARVEST DATE: 10/27/99

COOPERATORS:

Larry Maddux, agronomist; Steve Milne and David Zeit, technicians

TARGET POPULATION: 22,000 plants/acre, 9.5 in. spacing

FINAL STAND (% of target): 101

SILK DATES: 7/21/99 - 7/31/99

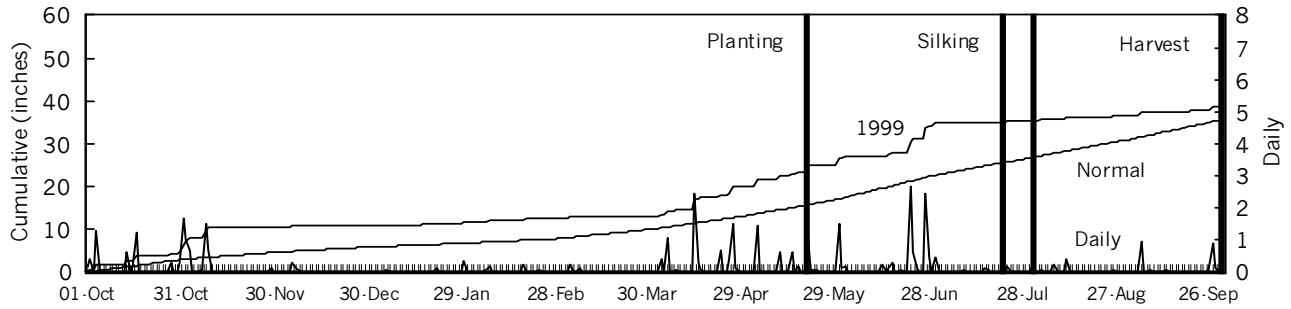
YIELD: **Avg. (bu/a):** 105 **Range (bu/a):** 89 - 127
LSD (bu/a): 12 **CV (%):** 10

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	10	--	0.2	9/9/99

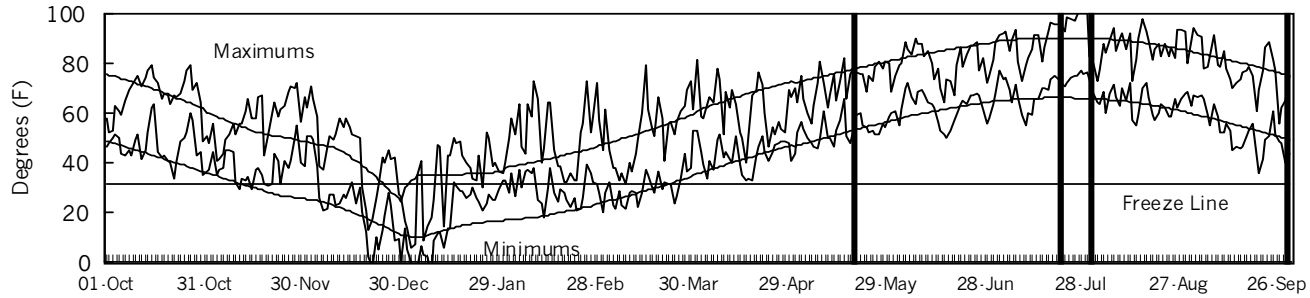
1999 GROWING CONDITONS:

Continued rainfall delayed planting for nearly a month and forced planting in wet soil. Stands were variable and may have been affected by the previous year's soybean herbicides. However, yields did not appear to be related to stands. Below-normal rainfall in August and September limited yields.

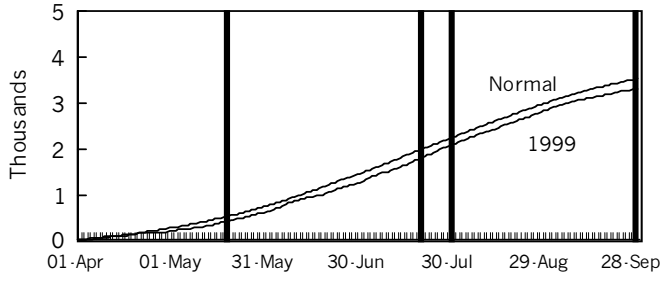
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	7.3	3.2	53	55	188	274
May	6.5	4.0	63	65	408	450
June	8.1	5.6	71	74	632	722
July	0.8	4.1	81	78	852	834
August	0.9	4.0	76	76	753	745
Sept.	2.4	4.7	65	68	474	531
Season Totals	25.9	25.6	68	69	3308	3555

TABLE 2. BROWN CO. CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	94	123	109	108	108	89	77	88	69	13	63	12	106	1	55
PIONEER	34K77	107	152	--	130	--	103	95	--	69	15	63	13	99	0	57
US SEEDS	US C1069Bt	96	--	--	--	--	92	--	--	--	--	64	12	88	0	55
US SEEDS	US C1079RR	92	--	--	--	--	88	--	--	--	--	64	12	86	0	54
MYCOGEN	2725	96	151	117	123	121	91	94	95	70	15	64	13	104	0	56
NC+	4880	113	--	--	--	--	108	--	--	--	--	64	13	105	0	55
US SEEDS	US C1129Bt	107	--	--	--	--	102	--	--	--	--	64	13	107	0	55
CARGILL	6888	108	--	--	--	--	103	--	--	--	--	65	13	101	0	55
MATURITY CHECK	MID-H-2530	105	136	102	120	114	100	85	83	71	15	65	13	105	0	54
MATURITY CHECK	PIONEER 3162	89	155	135	122	126	85	96	110	71	16	65	13	94	0	56
NK	N7639BT	89	161	--	125	--	85	100	--	71	16	65	14	105	1	58
NK	N79-L3	102	159	--	130	--	97	99	--	72	17	65	14	89	1	58
US SEEDS	US C1099	91	--	--	--	--	87	--	--	--	--	66	12	95	0	54
ASGROW	RX730YG	102	--	--	--	--	97	--	--	--	--	66	13	108	0	55
FONTANELLE	HC7766Bt	106	--	--	--	--	101	--	--	--	--	66	13	97	0	55
FREEDOM	5503	106	--	--	--	--	101	--	--	--	--	66	13	99	0	56
GARST	8342GLS/IT	105	--	--	--	--	100	--	--	--	--	66	13	106	0	56
MIDLAND	783	98	--	--	--	--	94	--	--	--	--	66	13	96	0	56
NET	1105	111	--	--	--	--	106	--	--	--	--	66	13	104	0	56
PIONEER	33P66	109	--	--	--	--	104	--	--	--	--	66	13	105	0	56
PSA	7727	107	137	--	122	--	102	86	--	71	15	66	13	101	0	56
US SEEDS	US E1120	98	--	--	--	--	94	--	--	--	--	66	13	102	0	56
US SEEDS	US C1119RR	97	--	--	--	--	93	--	--	--	--	66	13	108	0	55
MSG	G 8758Bt	105	--	--	--	--	100	--	--	--	--	66	14	104	3	57
NC+	5778	111	--	--	--	--	106	--	--	--	--	66	14	106	1	56
PFISTER	3977	99	157	--	128	--	95	98	--	71	17	66	14	97	2	57
DEKALB	DK611	104	--	--	--	--	99	--	--	--	--	67	13	95	0	56
PFISTER	2652	121	165	134	143	140	115	103	109	72	15	67	13	106	0	56
ASGROW	RX799Bt	98	--	--	--	--	94	--	--	--	--	67	14	104	2	58
MIDLAND	799Bt	103	--	--	--	--	98	--	--	--	--	67	14	106	1	58
MSG	G 8699	107	162	114	135	128	102	101	93	73	17	67	14	105	1	57
PSA	4700Bt	97	181	--	139	--	93	113	--	73	17	67	14	103	2	58
RENZE	6469	105	--	--	--	--	100	--	--	--	--	67	14	111	1	55
WILSON	1861Bt	108	--	--	--	--	103	--	--	--	--	67	14	106	2	58
NC+	5018	104	175	--	139	--	99	109	--	73	14	68	12	101	0	54
AGSOURCE	6212	111	--	--	--	--	106	--	--	--	--	68	13	96	0	58
AGSOURCE	EXP9114	105	--	--	--	--	101	--	--	--	--	68	13	93	0	54
CARGILL	7770	103	169	125	136	132	98	105	101	73	16	68	13	109	1	57
DEKALB	DK626Bty	94	--	--	--	--	90	--	--	--	--	68	13	104	0	56
LEWIS	5559	106	--	--	--	--	101	--	--	--	--	68	13	98	2	53
MIDLAND	XA130 EXP	96	--	--	--	--	92	--	--	--	--	68	13	91	0	53
PIONEER	33G26	103	--	--	--	--	99	--	--	--	--	68	13	99	0	56

(continued)

TABLE 2. BROWN CO. CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
TRIUMPH	1514Bt	104	--	--	--	--	99	--	--	--	--	68	13	102	1	55
US SEEDS	US C1129	101	--	--	--	--	97	--	--	--	--	68	13	101	0	56
AGSOURCE	EXP9116	103	--	--	--	--	98	--	--	--	--	68	14	102	0	56
FONTANELLE	HC7879Bt	105	--	--	--	--	101	--	--	--	--	68	14	109	1	58
FREEDOM	5680	121	176	--	148	--	115	110	--	76	16	68	14	95	1	55
HAWKEYE	6939BT	107	--	--	--	--	102	--	--	--	--	68	14	110	3	59
NET	1177	115	--	--	--	--	110	--	--	--	--	68	14	100	0	56
RENZE	8418BT	114	186	--	150	--	109	116	--	74	17	68	14	111	1	57
RENZE	6480	92	--	--	--	--	88	--	--	--	--	68	14	98	1	56
US SEEDS	US C1159	97	--	--	--	--	93	--	--	--	--	68	14	97	0	57
ASGROW	RX740	107	--	--	--	--	102	--	--	--	--	69	13	93	0	56
DEKALB	DK679Bty	118	--	--	--	--	113	--	--	--	--	69	13	105	0	56
GARST	8366Bt/LL	97	--	--	--	--	93	--	--	--	--	69	13	114	0	55
HAWKEYE	9191	119	--	--	--	--	114	--	--	--	--	69	13	98	2	55
MIDLAND	774	99	--	119	--	--	94	--	97	--	--	69	13	97	0	55
PFISTER	3049	94	168	122	131	128	90	105	100	74	16	69	13	102	0	55
PSA	7793IM	99	--	--	--	--	94	--	--	--	--	69	13	99	0	55
PSA	7864	110	170	--	140	--	105	106	--	75	16	69	13	103	0	56
US SEEDS	US C1139RR	100	--	--	--	--	95	--	--	--	--	69	13	98	0	55
AGSOURCE	7890	118	--	--	--	--	113	--	--	--	--	69	14	101	0	56
HAWKEYE	SX76	106	160	--	133	--	101	99	--	73	16	69	14	96	1	56
MYCOGEN	2888IMI	107	--	--	--	--	102	--	--	--	--	69	14	95	0	57
PFISTER	3321	105	--	--	--	--	100	--	--	--	--	69	14	106	0	55
TRIUMPH	1866	116	174	--	145	--	110	108	--	74	17	69	14	97	1	56
ASGROW	RX889	97	--	--	--	--	92	--	--	--	--	70	13	110	0	55
LEWIS	8268	110	184	--	147	--	105	115	--	75	16	70	13	94	1	56
ASGROW	RX897IMI	109	--	--	--	--	104	--	--	--	--	70	14	95	0	56
CARGILL	8412	113	186	--	150	--	108	116	--	75	17	70	14	99	1	56
MIDLAND	786	116	174	129	145	140	111	109	105	75	16	70	14	105	0	55
MSG	G 8795	127	--	--	--	--	121	--	--	--	--	70	14	104	1	56
PIONEER	32K61	104	166	145	135	138	99	103	118	76	16	70	14	106	2	57
WILSON	2330	115	180	126	148	140	110	112	102	78	17	72	15	93	0	54
WILSON	2335	104	172	127	138	135	100	107	104	78	18	73	15	100	1	54
AVERAGES		105	160	123	133	129	105	160	123	73	16	67	13	101	1	56
CV (%)		10	7	9	--	--	10	7	9	--	--	2	2	11	191	2
LSD (0.05)**		12	13	12	--	--	12	8	10	--	--	1	0	NS	NS	1

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

NORTH CENTRAL KANSAS STANDARD CORN TEST, DRYLAND

COUNTY: REPUBLIC

LOCATION: North Central Kansas Experiment Field, Belleville

TEST SITE: Crete silt loam

1998 CROP: Soybean

1997 CROP: Wheat

FERTILIZER (lbs/acre): 180 N 300 P_2O_5 0 K_2O

PLANTING DATE: 5/10/99

HARVEST DATE: 10/1/99

COOPERATORS:

Barney Gordon, agronomist; Michael Larson and Allan Milner, technicians

TARGET POPULATION: 22,000 plants/acre, 9.5 in. spacing

FINAL STAND (% of target): 126

SILK DATES: 7/15/99 - 7/19/99

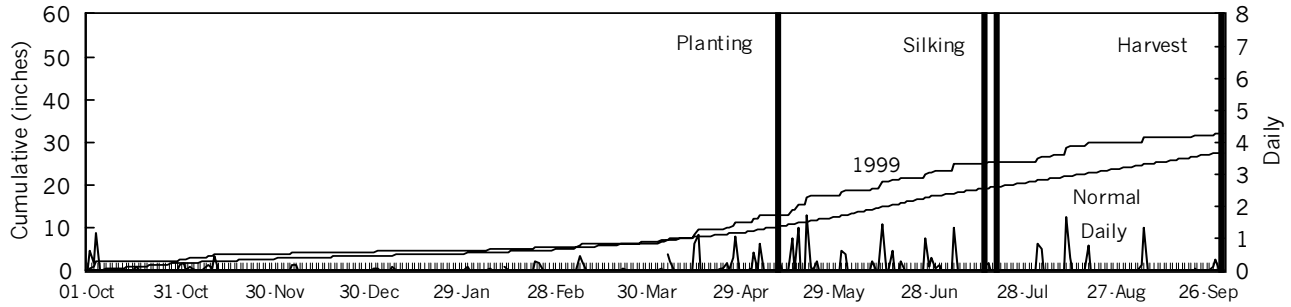
YIELD: **Avg. (bu/a):** 110 **Range (bu/a):** 69 - 153
LSD (bu/a): 11 **CV (%):** 9

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	10	--	0.2	9/8/99

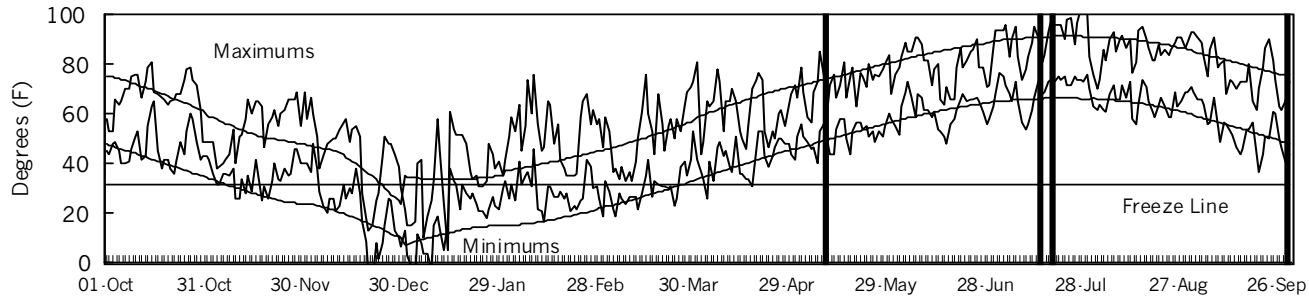
1999 GROWING CONDITONS:

Wet soil conditions delayed planting until early May. Continued wet, cool conditions slowed early plant growth. After the wet spring, July precipitation was below normal. High temperatures at silking likely reduced yields. Insect problems were minimal. Gray leaf spot was noted in early summer, but the dry July conditions prevented it from developing into a major concern. Corn borers and other insects caused minimal damage.

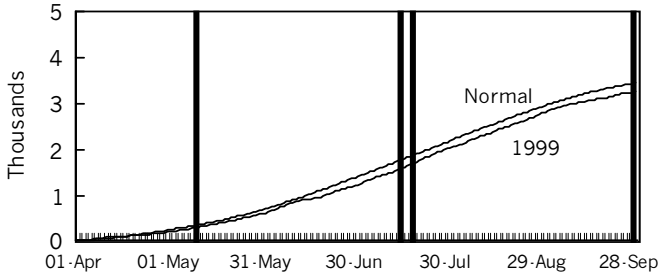
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	4.9	2.4	52	53	184	242
May	6.9	3.7	62	64	402	427
June	5.0	4.8	70	74	601	718
July	2.0	3.3	81	79	845	835
August	4.5	3.3	76	77	760	748
Sept.	2.1	3.5	65	67	468	518
Season Totals	25.3	20.9	68	69	3259	3487

TABLE 3. REPUBLIC CO. DRYLAND CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	71	135	61	103	89	64	94	85	70	14	66	16	122	0	58
DEKALB	DK567	138	--	--	--	--	125	--	--	--	--	67	17	123	0	58
PIONEER	35N05	115	161	--	138	--	104	112	--	72	17	67	18	124	0	58
DEKALB	DK595Bty	123	--	--	--	--	112	--	--	--	--	67	19	129	0	56
PIONEER	34K77	125	142	103	133	123	113	99	143	71	18	67	20	132	0	56
PIONEER	36D14	118	--	--	--	--	107	--	--	--	--	68	17	127	0	58
PIONEER	35P12	113	--	--	--	--	102	--	--	--	--	68	17	118	0	58
MATURITY CHECK	MID-H-2530	105	135	67	120	103	96	94	94	72	17	68	19	126	0	56
CARGILL	6888	118	146	--	132	--	107	102	--	73	17	68	20	128	0	56
NC+	4880	134	--	60	--	--	122	--	83	--	--	68	20	127	0	56
NC+	5018	145	164	--	155	--	132	114	--	74	18	68	20	125	0	56
NET	1105	113	--	--	--	--	103	--	--	--	--	68	20	123	0	56
PSA	7727	93	151	--	122	--	84	105	--	72	18	68	20	121	0	56
FREEDOM	5503	96	--	--	--	--	87	--	--	--	--	68	21	129	0	56
MYCOGEN	2787	90	--	--	--	--	82	--	--	--	--	68	21	127	0	56
PFISTER	3321	106	--	--	--	--	96	--	--	--	--	68	21	128	0	56
TRIUMPH	1141Bt	126	--	--	--	--	115	--	--	--	--	68	21	130	0	56
ASGROW	RX638YG	107	--	--	--	--	97	--	--	--	--	69	18	131	0	58
GARST	8541IT	110	144	--	127	--	100	101	--	72	18	69	19	120	0	57
MIDLAND	7E04	148	--	--	--	--	134	--	--	--	--	69	19	124	0	56
ASGROW	RX686RR/YG	71	--	--	--	--	64	--	--	--	--	69	20	131	0	56
ASGROW	RX738RR	103	--	--	--	--	93	--	--	--	--	69	20	124	0	56
CARGILL	7770	78	157	103	117	113	71	109	144	74	20	69	20	129	0	56
DEKALB	DK611	99	--	--	--	--	90	--	--	--	--	69	20	127	0	56
FREEDOM	5680	103	155	--	129	--	93	108	--	74	20	69	20	123	0	56
NK	N79-L3	107	142	--	125	--	97	99	--	73	19	69	20	127	0	56
PSA	7793IM	69	--	--	--	--	63	--	--	--	--	69	20	121	0	56
MIDLAND	786	109	155	67	132	110	99	108	93	75	21	69	21	125	0	56
MIDLAND	7A04Bt	73	--	--	--	--	66	--	--	--	--	69	21	124	0	56
MYCOGEN	2888IMI	116	--	--	--	--	105	--	--	--	--	69	21	128	0	56
NK	N7639BT	133	159	--	146	--	121	111	--	73	19	69	21	126	0	56
PFISTER	2652	85	131	76	108	97	77	91	105	74	19	69	21	131	0	56
MATURITY CHECK	PIONEER 3162	96	136	59	116	97	87	95	82	72	20	69	22	125	0	56
MIDLAND	798	130	156	--	143	--	118	109	--	74	21	69	22	127	0	56
MIDLAND	795	152	--	--	--	--	138	--	--	--	--	69	22	119	0	56
MSG	G 8699	122	--	--	--	--	111	--	--	--	--	69	22	125	0	57
MIDLAND	XB140W EXP	71	--	--	--	--	64	--	--	--	--	69	23	127	0	56
MIDLAND	7A08	109	--	--	--	--	99	--	--	--	--	70	19	123	0	56
CARGILL	8412	153	150	--	151	--	139	104	--	75	20	70	20	125	0	56
ASGROW	RX740	124	--	--	--	--	112	--	--	--	--	70	21	121	0	56
ASGROW	RX799Bt	122	--	--	--	--	111	--	--	--	--	70	21	120	0	56
MSG	G 8758Bt	123	--	--	--	--	111	--	--	--	--	70	21	130	0	56
PFISTER	3977	114	151	--	133	--	104	105	--	74	20	70	21	123	0	56
PSA	7864	124	136	--	130	--	113	95	--	75	20	70	21	127	0	56
MSG	G 8795	106	--	--	--	--	96	--	--	--	--	70	22	129	0	56
PFISTER	3049	89	134	39	112	88	81	94	54	74	20	70	22	128	0	56
PSA	4700Bt	106	141	--	123	--	96	98	--	75	21	70	22	134	0	56
AVERAGES		110	143	72	127	108	110	143	72	73	19	69	20	126	0	56
CV (%)		9	9	14	--	--	9	9	14	--	--	1	1	4	0	1
LSD (0.05)**		11	15	12	--	--	10	11	16	--	--	0	0	6	0	0

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

NORTHEASTERN KANSAS STANDARD CORN TEST ON SILT LOAM SOIL

COUNTY: RILEY

LOCATION: Agronomy North Farm near Manhattan

TEST SITE: Reading silt loam

1998 CROP: Soybean

1997 CROP: Corn

FERTILIZER (lbs/acre): 150 N 0 P_2O_5 0 K_2O

PLANTING DATE: 5/3/99

HARVEST DATE: 9/17/99

COOPERATORS:

Kraig Roozeboom, agronomist; Karl Mannschreck, superintendent

TARGET POPULATION: 22,000 plants/acre, 9.5 in. spacing

FINAL STAND (% of target): 106

SILK DATES: 7/9/99 - 7/15/99

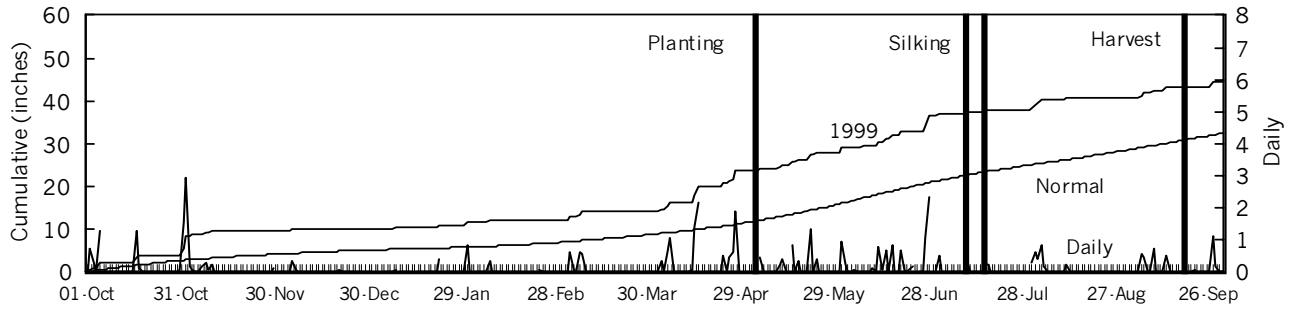
YIELD: **Avg. (bu/a):** 143 **Range (bu/a):** 114 - 160
LSD (bu/a): 11 **CV (%):** 6

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	10	--	0.1	9/17/99

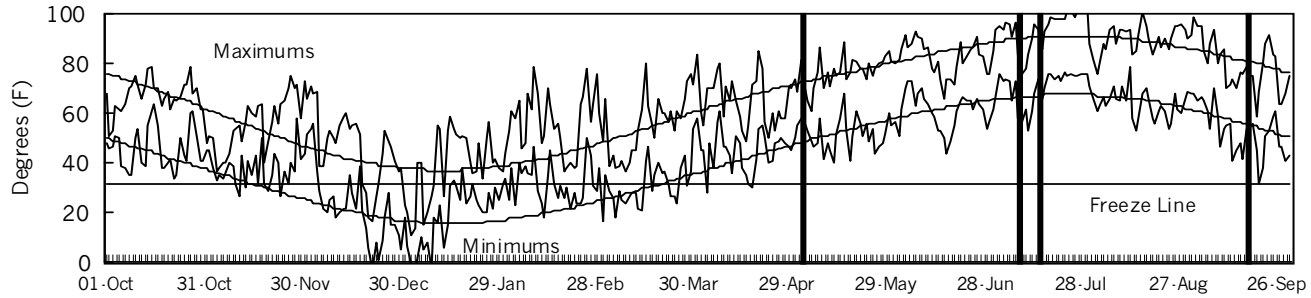
1999 GROWING CONDITONS:

April rains delayed planting and contributed to wet seedbed conditions. However, resulting stands were generally uniform and above the target population. Weed control was excellent. Heavy rains in June may have reduced the availability of applied N fertilizer. Insects and diseases caused minimal damage.

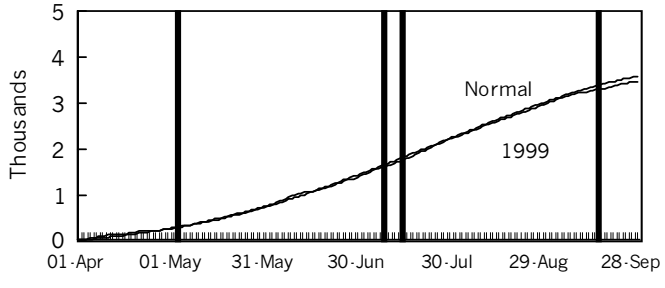
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	9.5	2.8	55	54	250	259
May	5.2	4.5	64	65	469	447
June	7.5	5.3	72	74	636	723
July	1.8	3.8	82	79	863	853
August	2.5	3.4	77	77	760	768
Sept.	3.8	3.8	66	69	497	567
Season Totals	30.3	23.5	69	70	3474	3615

TABLE 4. RILEY CO. CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
US SEEDS	US E1120	129	--	--	--	--	91	--	--	--	--	66	19	103	0	54
MATURITY CHECK	SHORT - C4111	136	102	133	119	123	95	79	93	70	14	67	15	106	0	57
US SEEDS	US C1079RR	132	--	--	--	--	93	--	--	--	--	67	15	98	0	58
PIONEER	34K77	149	--	--	--	--	104	--	--	--	--	67	16	105	0	57
US SEEDS	US C1099	114	--	--	--	--	80	--	--	--	--	67	16	104	0	56
MIDLAND	7E04	143	--	--	--	--	100	--	--	--	--	67	17	99	0	56
MATURITY CHECK	MID-H-2530	127	120	120	124	122	89	93	84	72	15	68	16	106	0	57
US SEEDS	US C1129Bt	139	--	--	--	--	98	--	--	--	--	68	16	110	0	57
US SEEDS	US C1069Bt	142	--	--	--	--	100	--	--	--	--	68	17	108	0	57
US SEEDS	US C1119RR	134	--	--	--	--	94	--	--	--	--	68	18	107	0	55
ASGROW	RX730YG	150	--	--	--	--	105	--	--	--	--	68	19	111	0	54
CARGILL	6888	138	128	--	133	--	97	99	--	72	17	68	19	101	0	54
PSA	7727	135	124	--	129	--	94	96	--	71	16	68	19	101	0	55
NC+	5778	143	--	--	--	--	100	--	--	--	--	68	20	109	0	56
ASGROW	RX740	145	--	--	--	--	102	--	--	--	--	69	17	95	0	59
DEKALB	DK611	158	--	--	--	--	111	--	--	--	--	69	17	110	0	56
FREEDOM	5503	142	--	--	--	--	100	--	--	--	--	69	19	110	0	54
PIONEER	33P66	137	--	--	--	--	96	--	--	--	--	69	19	101	0	58
CARGILL	7770	144	124	153	134	140	101	96	107	73	17	69	20	106	0	56
GARST	8325Bt	135	--	--	--	--	95	--	--	--	--	69	20	108	0	54
PSA	4700Bt	138	129	--	134	--	97	100	--	72	18	69	20	114	0	55
ASGROW	RX799Bt	144	--	--	--	--	101	--	--	--	--	69	21	111	0	54
MSG	G 8758Bt	143	--	--	--	--	100	--	--	--	--	69	21	112	0	54
PFISTER	2652	158	142	141	150	147	110	110	98	73	15	70	17	105	0	55
MYCOGEN	2787	159	--	--	--	--	111	--	--	--	--	70	18	112	0	55
NC+	5445	140	148	145	144	144	98	115	101	73	16	70	18	108	0	55
PFISTER	3049	140	134	148	137	141	98	104	104	74	16	70	18	102	0	54
PSA	7793IM	151	--	--	--	--	106	--	--	--	--	70	18	105	0	55
US SEEDS	US C1139RR	139	--	--	--	--	97	--	--	--	--	70	18	102	0	56
US SEEDS	US C1129	142	--	--	--	--	100	--	--	--	--	70	18	104	0	57
MIDLAND	7A08	147	--	--	--	--	103	--	--	--	--	70	19	103	0	57
MSG	G 8699	143	143	--	143	--	100	110	--	74	17	70	19	108	0	54
US SEEDS	US C1159	126	--	--	--	--	88	--	--	--	--	70	19	98	0	56
ASGROW	RX889	156	--	--	--	--	109	--	--	--	--	70	20	101	0	55
PFISTER	3977	147	146	--	147	--	103	113	--	74	19	70	21	112	0	54
NC+	5018	150	145	--	148	--	105	112	--	74	16	71	18	104	0	55
MATURITY CHECK	PIONEER 3162	123	134	137	129	131	86	104	96	73	17	71	19	110	0	59
PSA	7864	150	142	--	146	--	105	110	--	75	18	71	21	108	0	53
DEKALB	DK679Bty	160	--	--	--	--	112	--	--	--	--	71	22	112	0	55
MSG	G 8795	149	--	--	--	--	105	--	--	--	--	71	22	102	0	53
CARGILL	8412	152	124	--	138	--	107	96	--	75	20	71	23	102	0	55
MIDLAND	795	149	--	--	--	--	104	--	--	--	--	72	21	102	0	55
MIDLAND	786	154	130	--	142	--	108	101	--	76	18	72	21	108	0	54
FREEDOM	5680	145	127	160	136	144	101	98	112	76	19	72	22	110	0	52
MYCOGEN	2888IMI	152	--	--	--	--	107	--	--	--	--	72	22	109	0	55
PFISTER	3321	135	--	--	--	--	95	--	--	--	--	72	22	110	0	54
MIDLAND	798	151	127	--	139	--	106	98	--	75	20	72	24	105	0	54
ASGROW	RX897IMI	131	--	--	--	--	92	--	--	--	--	73	22	97	0	53
AVERAGES		143	129	143	136	138	143	129	143	73	17	69	19	106	0	55
CV (%)		6	9	7	--	--	6	9	7	--	--	1	4	6	0	3
LSD (0.05)**		11	13	11	--	--	8	10	8	--	--	1	1	8	0	2

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

TABLE 5. NORTHEASTERN KANSAS CORN TEST YIELD SUMMARY, 1997-1999.

			1999 YIELD AS % OF TEST AVERAGE [1]					1997-1999		
	BRAND	NAME	DND	BRD	RPD	RLD	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
	NC+	5018	113	99	132	105	112	27 *	5	7
	CARGILL	8412	103	108	139	107	114	23 *	6	8
	WILSON	2330	111	110	--	--	--	23 *	6	6
	MIDLAND	786	103	111	99	108	105	21 *	4	8
	PIONEER	32K61	94	99	--	--	--	21 *	5	6
	FREEDOM	5680	98	115	93	101	102	19 *	5	10
	NC+	5445	--	--	--	98	--	18 *	4	9
	PFISTER	3977	107	95	104	103	102	18 *	4	8
	PIONEER	34K77	--	103	113	104	--	18 *	5	6
	WILSON	2335	101	100	--	--	--	18 *	5	6
	PSA	4700Bt	104	93	96	97	98	17 *	7	8
	NK	N7639BT	97	85	121	--	--	15 *	5	7
	CARGILL	7770	96	98	71	101	91	14 *	5	12
	MSG	G 8699	103	102	111	100	104	14 *	3	7
	NC+	4880	97	108	122	--	--	14 *	5	6
	PFISTER	2652	107	115	77	110	102	14 *	4	12
	NK	N79-L3	96	97	97	--	--	13 *	5	7
	CARGILL	6888	93	103	107	97	100	10 *	3	7
	MYCOGEN	2725	90	91	--	--	--	6	4	6
	PFISTER	3049	97	90	81	98	91	6	4	12
	PSA	7727	90	102	84	94	93	4	4	8
c	MATURITY CHECK	PIONEER 3162	92	85	87	86	88	1	2	12
c	MATURITY CHECK	MID-H-2530	92	100	96	89	94	-1	2	12
	MATURITY CHECK	SHORT - C4111	83	89	64	95	83	-11 *	4	12
	AGSOURCE	6212	100	106	--	--	--	--	--	--
	AGSOURCE	7890	104	113	--	--	--	--	--	--
	AGSOURCE	EXP9114	106	101	--	--	--	--	--	--
	AGSOURCE	EXP9116	97	98	--	--	--	--	--	--
	ASGROW	RX638YG	--	--	97	--	--	--	--	--
	ASGROW	RX686RR/YG	--	--	64	--	--	--	--	--
	ASGROW	RX730YG	98	97	--	105	--	--	--	--
	ASGROW	RX738RR	--	--	93	--	--	--	--	--
	ASGROW	RX740	103	102	112	102	105	--	--	--
	ASGROW	RX799Bt	108	94	111	101	103	--	--	--
	ASGROW	RX889	103	92	--	109	--	--	--	--
	ASGROW	RX897IMI	99	104	--	92	--	--	--	--
	DEKALB	DK567	--	--	125	--	--	--	--	--
	DEKALB	DK595Bty	--	--	112	--	--	--	--	--
	DEKALB	DK611	105	99	90	111	101	--	--	--
	DEKALB	DK626Bty	102	90	--	--	--	--	--	--
	DEKALB	DK647Bty	106	--	--	--	--	--	--	--
	DEKALB	DK679Bty	--	113	--	112	--	--	--	--
	FONTANELLE	HC7766Bt	96	101	--	--	--	--	--	--
	FONTANELLE	HC7879Bt	105	101	--	--	--	--	--	--
	FREEDOM	5503	93	101	87	100	95	--	--	--
	FRONTIER	F3175	102	--	--	--	--	--	--	--
	FRONTIER	F3200	106	--	--	--	--	--	--	--
	GARST	8325Bt	--	--	--	95	--	--	--	--
	GARST	8342GLS/IT	102	100	--	--	--	--	--	--
	GARST	8366Bt/LL	98	93	--	--	--	--	--	--
	GARST	8541IT	--	--	100	--	--	--	--	--
	HAWKEYE	6939BT	98	102	--	--	--	--	--	--
	HAWKEYE	9191	101	114	--	--	--	--	--	--
	HAWKEYE	SX76	102	101	--	--	--	--	--	--
	HOEGEMEYER	2668	101	--	--	--	--	--	--	--
	HOEGEMEYER	2683	105	--	--	--	--	--	--	--
	HOEGEMEYER	2693	91	--	--	--	--	--	--	--
	LEWIS	5559	102	101	--	--	--	--	--	--

(continued)

TABLE 5. NORTHEASTERN KANSAS CORN TEST YIELD SUMMARY, 1997-1999.

		1999 YIELD AS % OF TEST AVERAGE [1]					1997-1999		
BRAND	NAME	DND	BRD	RPD	RLD	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
LEWIS	6281Bt	105	--	--	--	--	--	--	--
LEWIS	6578RR	102	--	--	--	--	--	--	--
LEWIS	8268	101	105	--	--	--	--	--	--
MIDLAND	774	97	94	--	--	--	--	--	--
MIDLAND	783	--	94	--	--	--	--	--	--
MIDLAND	795	--	--	138	104	--	--	--	--
MIDLAND	798	--	--	118	106	--	--	--	--
MIDLAND	799Bt	--	98	--	--	--	--	--	--
MIDLAND	7A04Bt	--	--	66	--	--	--	--	--
MIDLAND	7A08	--	--	99	103	--	--	--	--
MIDLAND	7E04	--	--	134	100	--	--	--	--
MIDLAND	XA130 EXP	--	92	--	--	--	--	--	--
MIDLAND	XB140W EXP	--	--	64	--	--	--	--	--
MSG	G 8758Bt	102	100	111	100	103	--	--	--
MSG	G 8795	108	121	96	105	107	--	--	--
MYCOGEN	2787	--	--	82	111	--	--	--	--
MYCOGEN	2888IMI	98	102	105	107	103	--	--	--
NC+	5778	--	106	--	100	--	--	--	--
NC+	5878B	103	--	--	--	--	--	--	--
NC+	6868	100	--	--	--	--	--	--	--
NET	1105	99	106	103	--	--	--	--	--
NET	1177	98	110	--	--	--	--	--	--
PFISTER	3321	96	100	96	95	97	--	--	--
PIONEER	33G26	92	99	--	--	--	--	--	--
PIONEER	33P66	100	104	--	96	--	--	--	--
PIONEER	33R87	99	--	--	--	--	--	--	--
PIONEER	35N05	--	--	104	--	--	--	--	--
PIONEER	35P12	--	--	102	--	--	--	--	--
PIONEER	36D14	--	--	107	--	--	--	--	--
PSA	7793IM	91	94	63	106	88	--	--	--
PSA	7864	96	105	113	105	105	--	--	--
RENZE	6469	104	100	--	--	--	--	--	--
RENZE	6480	95	88	--	--	--	--	--	--
RENZE	8418BT	100	109	--	--	--	--	--	--
TRIUMPH	1141Bt	--	--	115	--	--	--	--	--
TRIUMPH	1514Bt	--	99	--	--	--	--	--	--
TRIUMPH	1866	--	110	--	--	--	--	--	--
US SEEDS	US C1069Bt	--	92	--	100	--	--	--	--
US SEEDS	US C1079RR	--	88	--	93	--	--	--	--
US SEEDS	US C1099	--	87	--	80	--	--	--	--
US SEEDS	US C1119RR	--	93	--	94	--	--	--	--
US SEEDS	US C1129	--	97	--	100	--	--	--	--
US SEEDS	US C1129Bt	--	102	--	98	--	--	--	--
US SEEDS	US C1139RR	--	95	--	97	--	--	--	--
US SEEDS	US C1159	--	93	--	88	--	--	--	--
US SEEDS	US E1120	--	94	--	91	--	--	--	--
WILSON	1861Bt	112	103	--	--	--	--	--	--
AVERAGES		173	105	110	143	133	--	--	--
CV (%)		8	10	9	6	--	--	--	--
LSD (0.05)**		9	12	10	8	--	--	--	--

1 DND = Doniphan Co., Severance BRD = Brown Co., Powhattan RPD = Republic Co., Belleville RLD = Riley Co., Manhattan

2 DYA = Differential Yielding Ability; average difference of hybrid yield compared to average of check hybrids in bushels per acre.

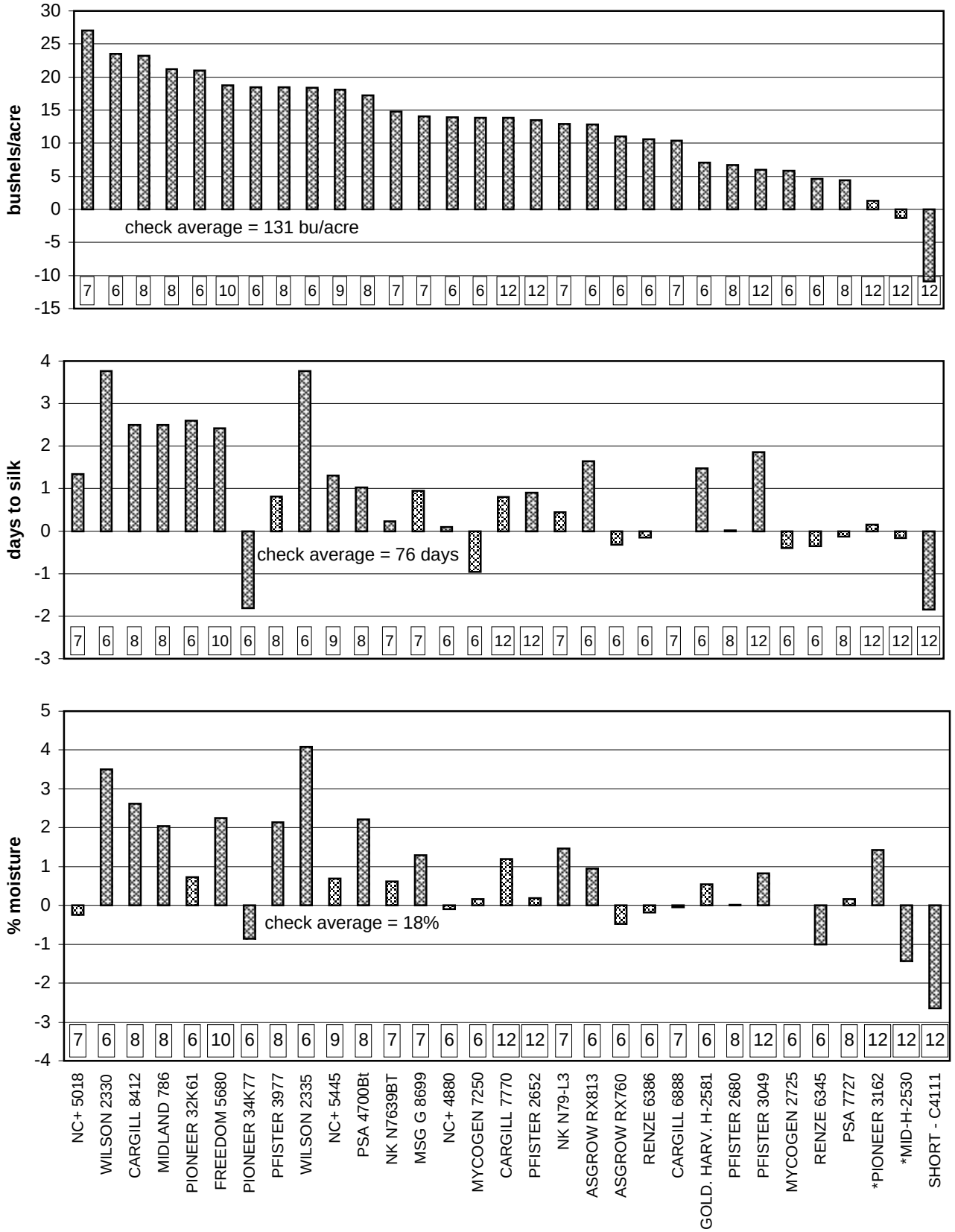
3 SE = Standard Error of DYA; measure of consistency of yield differences.

4 N = Number of tests where hybrid was compared with checks; DYA was calculated only for those with at least 6 comparisons.

c Check hybrid; yield of each hybrid was compared to average yield of these check hybrids.

***** Statistically significantly different from the average of the check hybrids, which = 0 ($P < 0.5$).

Figure 5. Northeastern Kansas corn hybrid performance summary, 1997-1999.



Bars show differences between hybrid and average of checks*.
Values in boxes are numbers of tests that compared hybrids and checks.

EAST CENTRAL KANSAS STANDARD CORN TEST ON SILT LOAM SOIL, IRRIGATED

COUNTY: SHAWNEE

LOCATION: Kansas River Valley Experiment Field, Rossville

TEST SITE: Eudora silt loam

1998 CROP: Corn

1997 CROP: Soybean

FERTILIZER (lbs/acre): 162 N 40 P_2O_5 0 K_2O

PLANTING DATE: 4/21/99

HARVEST DATE: 9/16/99

COOPERATORS:

Larry Maddux, agronomist; Charles Clark and William Riley, technicians

TARGET POPULATION: 30,000 plants/acre, 7.0 in. spacing

FINAL STAND (% of target): 108

SILK DATES: 7/2/99 - 7/7/99

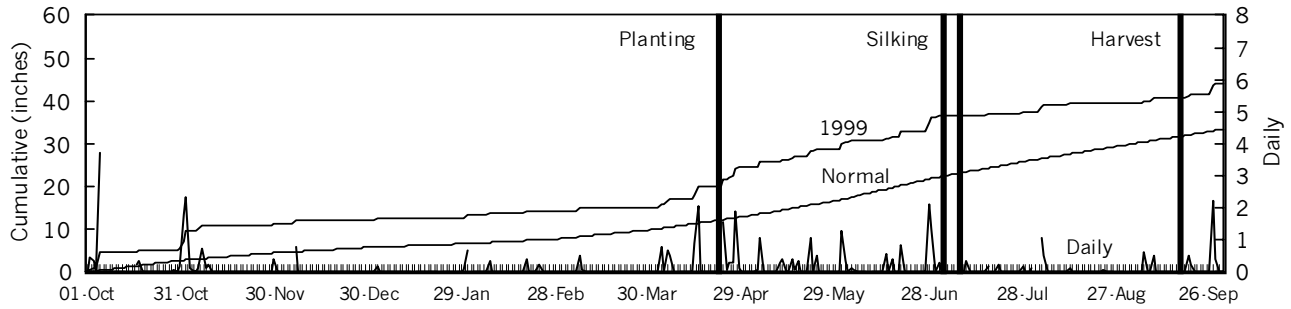
YIELD: **Avg. (bu/a):** 148 **Range (bu/a):** 124 - 188
LSD (bu/a): 21 **CV (%):** 12

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	40	--	0.7	9/7/99

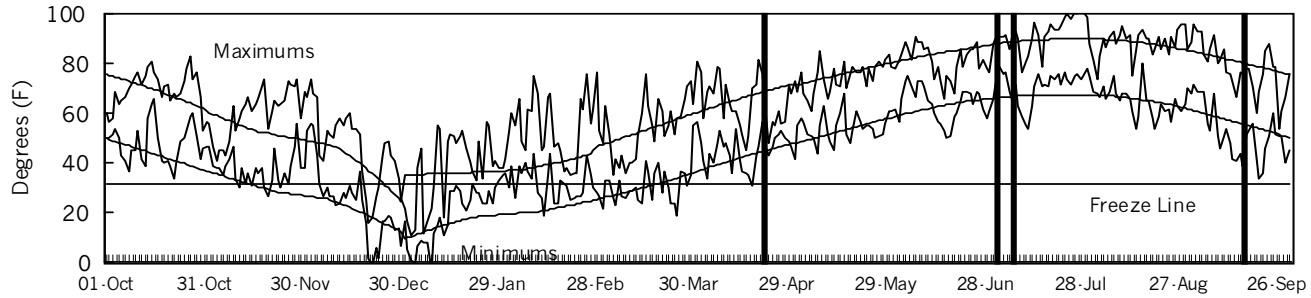
1999 GROWING CONDITONS:

Abundant spring rains did not delay planting for long, but they may have increased yield variability by causing significant, nonuniform, N loss after planting. European corn borers were present in the susceptible check hybrid but caused little or no lodging by harvest.

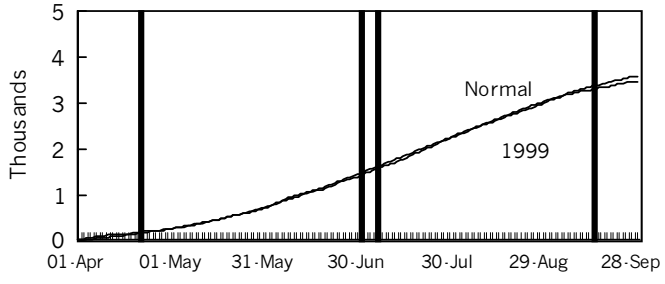
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	9.4	3.2	55	55	236	259
May	5.7	3.9	64	65	458	450
June	6.0	5.3	73	74	668	737
July	1.5	4.0	82	79	874	855
August	1.9	3.6	77	77	772	769
Sept.	4.7	3.4	65	68	473	550
Season Totals	29.0	23.4	69	70	3480	3620

TABLE 6. SHAWNEE CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	134	116	170	125	140	91	77	85	72	16	78	15	115	0	58
MATURITY CHECK	MID-H-2530	133	124	164	128	140	90	82	82	75	16	78	16	108	0	59
DEKALB	DK626Bty	141	--	--	--	--	96	--	--	--	--	78	17	109	0	60
NET	1105	126	--	--	--	--	85	--	--	--	--	78	17	106	0	58
ASGROW	RX740	124	--	--	--	--	84	--	--	--	--	78	18	95	0	60
HOEGEMEYER	2666	140	146	--	143	--	95	97	--	73	17	78	18	110	0	58
HOEGEMEYER	2693	142	149	203	145	165	96	99	102	74	17	78	18	108	0	59
MIDLAND	764	152	157	--	155	--	103	105	--	74	17	78	18	112	0	58
MYCOGEN	2725	142	154	195	148	164	96	102	98	73	17	78	18	109	0	58
TERRA	TR 1128	132	--	--	--	--	89	--	--	--	--	78	18	94	0	60
TERRA	TR 1109NE	137	--	--	--	--	93	--	--	--	--	78	18	108	0	58
ASGROW	RX730YG	158	--	--	--	--	107	--	--	--	--	78	19	100	0	58
CARGILL	7770	139	140	199	140	160	95	93	100	75	18	78	19	115	0	58
PIONEER	33P66	157	--	--	--	--	106	--	--	--	--	78	19	99	0	60
GARST	8325Bt	148	--	--	--	--	100	--	--	--	--	78	20	109	0	57
MIDLAND	799Bt	148	--	--	--	--	100	--	--	--	--	78	20	123	0	58
MSG	G 8758Bt	153	--	--	--	--	104	--	--	--	--	78	20	118	0	59
NC+	5878B	145	--	--	--	--	98	--	--	--	--	78	20	117	0	59
MATURITY CHECK	PIONEER 3162	156	122	192	139	157	106	81	96	74	19	78	21	100	0	60
NC+	6868	149	--	--	--	--	101	--	--	--	--	78	21	113	0	57
PIONEER	34R07	133	--	--	--	--	90	--	--	--	--	79	17	106	0	59
DEKALB	DK647Bty	154	--	--	--	--	104	--	--	--	--	79	18	113	0	57
MIDLAND	783	124	--	--	--	--	84	--	--	--	--	79	18	107	0	58
MIDLAND	XA130 EXP	127	--	--	--	--	86	--	--	--	--	79	18	104	0	58
NK	N7639BT	137	157	--	147	--	93	105	--	75	18	79	18	115	0	60
GARST	8366Bt/LL	146	--	--	--	--	99	--	--	--	--	79	19	113	0	58
MIDLAND	786	176	154	242	165	190	120	102	121	76	18	79	19	108	0	56
NC+	5445	137	154	189	146	160	93	103	95	74	19	79	19	109	0	57
ASGROW	RX799Bt	156	--	--	--	--	106	--	--	--	--	79	20	109	0	58
MYCOGEN	2888IMI	161	--	--	--	--	109	--	--	--	--	79	20	109	0	58
NET	1167	158	--	--	--	--	107	--	--	--	--	79	20	118	0	57
NK	N79-L3	136	165	--	151	--	92	110	--	74	19	79	20	113	0	61
FRONTIER	F3175	171	--	--	--	--	116	--	--	--	--	79	21	91	0	57
DELANGE	DS 1997	150	--	--	--	--	102	--	--	--	--	80	18	90	0	58
ASGROW	RX889	146	--	--	--	--	99	--	--	--	--	80	19	118	0	58
DEKALB	DK655	138	--	--	--	--	94	--	--	--	--	80	19	116	0	60
DELANGE	DS 1995	155	--	206	--	--	105	--	103	--	--	80	19	101	0	59
MSG	G 8699	148	--	--	--	--	100	--	--	--	--	80	19	109	0	57
ASGROW	RX897IMI	150	--	--	--	--	102	--	--	--	--	80	20	101	0	57
CARGILL	8412	182	174	--	178	--	123	116	--	76	19	80	20	108	0	58
MSG	G 8795	188	--	--	--	--	127	--	--	--	--	80	20	107	0	58
GARST	8222IT	140	184	--	162	--	95	122	--	76	20	80	21	114	0	58
HOEGEMEYER	2730	166	--	--	--	--	113	--	--	--	--	80	21	106	0	55
NET	1177	169	--	--	--	--	115	--	--	--	--	80	22	115	0	57
FRONTIER	F3200	164	--	--	--	--	111	--	--	--	--	81	20	110	0	58
PIONEER	3237	140	164	188	152	164	95	109	94	77	18	82	19	111	0	59
PIONEER	32K61	127	140	209	134	159	86	93	105	77	19	82	20	105	0	61
AVERAGES		148	151	199	149	166	148	151	199	75	18	79	19	108	0	58
CV (%)		12	6	7	--	--	12	6	7	--	--	1	5	4	0	2
LSD (0.05)**		21	13	16	--	--	14	9	8	--	--	1	1	6	0	1

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

NORTH CENTRAL KANSAS STANDARD CORN TEST, IRRIGATED

COUNTY: REPUBLIC

LOCATION: Irrigation Experiment Field, Scandia

TEST SITE: Crete silt loam

1998 CROP: Soybean

1997 CROP: Corn

FERTILIZER (lbs/acre): 220 N 30 P_2O_5 0 K_2O

PLANTING DATE: 5/8/99

HARVEST DATE: 10/20/99

COOPERATORS:

Barney Gordon, agronomist; Michael Larson and Allan Milner, technicians

TARGET POPULATION: 30,000 plants/acre, 7.0 in. spacing

FINAL STAND (% of target): 115

SILK DATES: 7/15/99 - 7/23/99

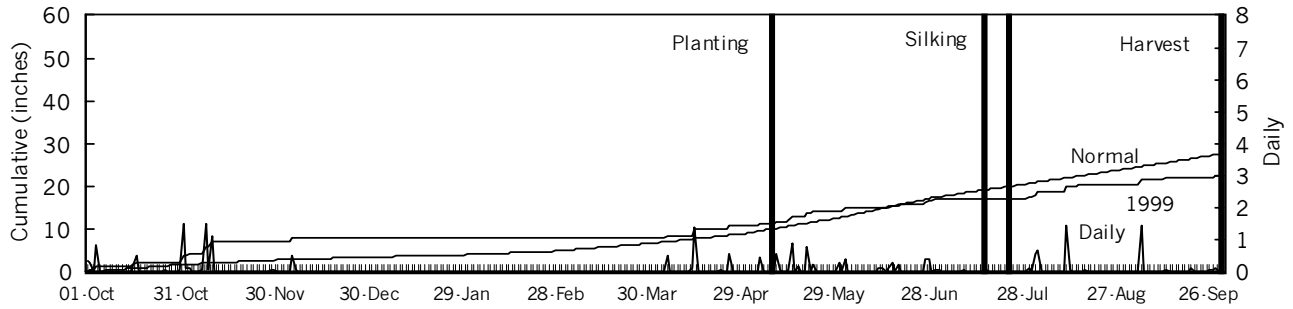
YIELD: **Avg. (bu/a):** 191 **Range (bu/a):** 161 - 211
LSD (bu/a): 9 **CV (%):** 4

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	75	--	2.6	9/8/99

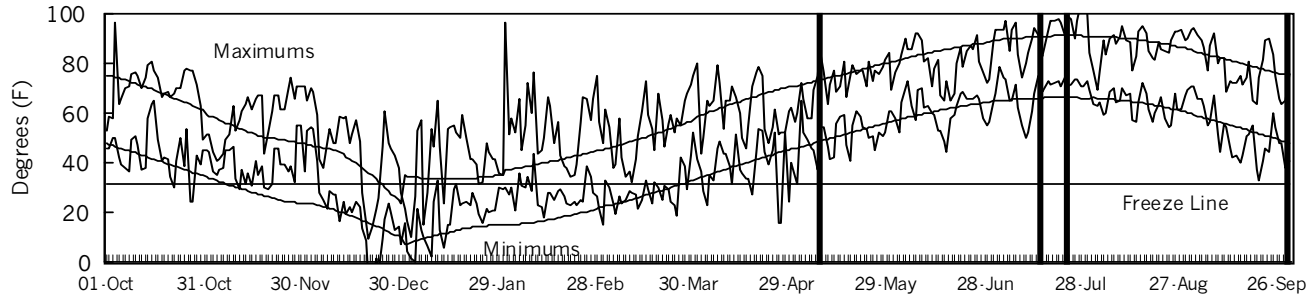
1999 GROWING CONDITONS:

Wet conditions in April delayed planting until May. Cool, wet conditions after planting did not reduce stands but did slow early-season plant growth. Timely August rains favored grain development and filling. European corn borers infested susceptible hybrids but caused no noticeable lodging or ear drop. Gray leaf spot was present at low levels.

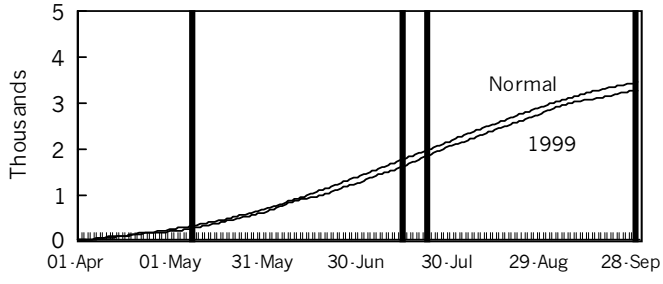
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	2.8	2.4	50	53	191	242
May	3.7	3.7	62	64	412	427
June	2.5	4.8	71	74	618	718
July	0.5	3.3	81	79	841	835
August	3.0	3.3	76	77	745	748
Sept.	2.0	3.5	65	67	475	518
Season Totals	14.5	20.9	67	69	3281	3487

TABLE 7. REPUBLIC CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	169	138	196	153	168	88	79	95	72	14	68	13	116	0	60
DEKALB	DK595Bty	210	--	--	--	--	110	--	--	--	--	70	14	114	0	60
NC+	4880	209	--	--	--	--	110	--	--	--	--	70	14	116	0	60
HOEGEMEYER	2668	187	--	--	--	--	98	--	--	--	--	70	15	115	0	59
ASGROW	RX638YG	183	--	--	--	--	96	--	--	--	--	71	14	117	0	59
MATURITY CHECK	MID-H-2530	181	148	199	164	176	95	84	96	75	15	71	14	115	0	59
NET	1105	189	--	--	--	--	99	--	--	--	--	71	15	117	0	60
RENZE	6386	208	179	--	193	--	109	102	--	75	16	71	15	115	0	60
DEKALB	DK647Bty	196	--	--	--	--	103	--	--	--	--	71	16	115	0	59
NK	N7639BT	206	191	--	198	--	108	109	--	74	16	71	16	117	0	61
ASGROW	RX738RR	190	--	--	--	--	100	--	--	--	--	72	14	114	0	60
ASGROW	RX740	198	--	--	--	--	104	--	--	--	--	72	14	112	0	61
HOEGEMEYER	2718	186	--	--	--	--	98	--	--	--	--	72	14	116	0	59
ASGROW	RX686RR/YG	189	--	--	--	--	99	--	--	--	--	72	15	114	0	58
CARGILL	7770	186	187	227	187	200	98	107	110	76	16	72	15	113	0	60
GARST	8543Bt/IT	206	--	--	--	--	108	--	--	--	--	72	15	114	0	59
MIDLAND	7E04	207	--	--	--	--	109	--	--	--	--	72	15	113	0	59
MIDLAND	7A08	195	--	--	--	--	102	--	--	--	--	72	15	117	0	59
MYCOGEN	2725	195	176	220	185	197	102	100	106	75	16	72	15	113	0	59
NC+	5445	208	192	217	200	206	109	110	105	76	16	72	15	114	0	59
PIONEER	33R87	188	180	--	184	--	99	103	--	75	16	72	15	115	0	61
MSG	G 8758Bt	204	--	--	--	--	107	--	--	--	--	72	16	117	0	60
NK	N79-L3	207	182	--	194	--	108	104	--	76	16	72	16	115	0	61
PIONEER	33P66	207	--	--	--	--	109	--	--	--	--	72	16	110	0	60
PREMIUM	P265	178	--	--	--	--	94	--	--	--	--	72	17	116	0	59
ASGROW	RX813	176	--	226	--	--	92	--	109	--	--	73	15	115	0	59
MIDLAND	7A04Bt	196	--	--	--	--	103	--	--	--	--	73	15	115	0	59
MSG	G 8699	179	--	188	--	--	94	--	91	--	--	73	15	117	0	59
ASGROW	RX799Bt	194	192	--	193	--	102	110	--	77	17	73	16	116	0	60
GARST	8325Bt	190	--	--	--	--	100	--	--	--	--	73	16	114	0	59
MATURITY CHECK	PIONEER 3162	163	158	196	161	172	86	90	95	75	16	73	16	113	0	60
MYCOGEN	2888IMI	189	--	--	--	--	99	--	--	--	--	73	16	114	0	60
NC+	5878B	200	--	--	--	--	105	--	--	--	--	73	16	112	0	60
RENZE	6480	188	--	--	--	--	99	--	--	--	--	73	17	114	0	59
PIONEER	33H67	189	--	--	--	--	99	--	--	--	--	74	15	115	0	61
DEKALB	DK655	177	--	--	--	--	93	--	--	--	--	74	16	113	0	60
HYTEST	HT7722	187	--	--	--	--	98	--	--	--	--	74	16	118	0	60
MSG	G 8795	179	--	--	--	--	94	--	--	--	--	74	16	115	0	60
NET	1177	191	--	--	--	--	100	--	--	--	--	74	16	117	0	59
FRONTIER	F3200	184	--	--	--	--	97	--	--	--	--	75	15	114	0	59
MIDLAND	795	211	--	--	--	--	111	--	--	--	--	75	15	116	0	60
RENZE	8389BT	199	--	--	--	--	104	--	--	--	--	75	15	112	0	60
FRONTIER	F3175	178	--	--	--	--	93	--	--	--	--	75	16	115	0	60
HYTEST	HT7820	171	--	--	--	--	90	--	--	--	--	75	16	116	0	59
PIONEER	3237	188	184	201	186	191	99	105	97	78	16	75	16	117	0	60
RENZE	6469	181	--	--	--	--	95	--	--	--	--	75	16	114	0	60
RENZE	8418BT	195	188	--	192	--	103	107	--	78	17	75	16	116	0	60
NET	1167	179	--	--	--	--	94	--	--	--	--	75	17	115	0	58
MIDLAND	XB140W EXP	161	--	--	--	--	85	--	--	--	--	75	18	114	0	58
GARST	8366Bt/LL	194	--	--	--	--	102	--	--	--	--	76	15	116	0	59
ASGROW	RX889	191	195	--	193	--	100	111	--	79	17	76	16	114	0	59
CARGILL	8412	194	--	--	--	--	102	--	--	--	--	76	16	114	0	59
HOEGEMEYER	2730	184	--	--	--	--	96	--	--	--	--	76	16	115	0	58
MIDLAND	798	200	193	--	197	--	105	110	--	79	17	76	16	115	0	59
AVERAGES		191	175	207	183	191	191	175	207	76	16	73	15	115	0	60
CV (%)		4	4	7	--	--	4	4	7	--	--	1	3	2	0	1
LSD (0.05)**		9	8	17	--	--	5	5	8	--	--	1	1	3	0	1

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

TABLE 8. NORTHEASTERN KANSAS IRRIGATED CORN TEST YIELD SUMMARY, 1997-1999.

			1999 YIELD AS % OF TEST AVERAGE [1]			1997-1999		
	BRAND	NAME	SHI	RPI	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
	NK	N7639BT	93	108	100	25	11	4
	NK	N79-L3	92	108	100	25	11	4
	NC+	5445	93	109	101	22 *	7	6
	CARGILL	7770	95	98	96	19 *	6	6
	MYCOGEN	2725	96	102	99	19 *	5	6
	HOEGEMEYER	2693	96	--	--	17 *	6	5
	PIONEER	32K61	86	--	--	17	12	4
	PIONEER	3237	95	99	97	16	7	6
	ASGROW	RX813	--	92	--	14	5	4
c	MATURITY CHECK	PIONEER 3162	106	86	96	3	4	6
c	MATURITY CHECK	MID-H-2530	90	95	92	-3	4	6
	MATURITY CHECK	SHORT - C4111	91	88	90	-7 *	2	6
	ASGROW	RX638YG	--	96	--	--	--	--
	ASGROW	RX686RR/YG	--	99	--	--	--	--
	ASGROW	RX730YG	107	--	--	--	--	--
	ASGROW	RX738RR	--	100	--	--	--	--
	ASGROW	RX740	84	104	94	--	--	--
	ASGROW	RX799Bt	106	102	104	--	--	--
	ASGROW	RX889	99	100	100	--	--	--
	ASGROW	RX897IMI	102	--	--	--	--	--
	CARGILL	8412	123	102	112	--	--	--
	DEKALB	DK595Bty	--	110	--	--	--	--
	DEKALB	DK626Bty	96	--	--	--	--	--
	DEKALB	DK647Bty	104	103	104	--	--	--
	DEKALB	DK655	94	93	93	--	--	--
	DELANGE	DS 1995	105	--	--	--	--	--
	DELANGE	DS 1997	102	--	--	--	--	--
	FRONTIER	F3175	116	93	104	--	--	--
	FRONTIER	F3200	111	97	104	--	--	--
	GARST	8222IT	95	--	--	--	--	--
	GARST	8325Bt	100	100	100	--	--	--
	GARST	8366Bt/LL	99	102	100	--	--	--
	GARST	8543Bt/IT	--	108	--	--	--	--
	HOEGEMEYER	2666	95	--	--	--	--	--
	HOEGEMEYER	2668	--	98	--	--	--	--
	HOEGEMEYER	2718	--	98	--	--	--	--
	HOEGEMEYER	2730	113	96	105	--	--	--
	HYTEST	HT7722	--	98	--	--	--	--
	HYTEST	HT7820	--	90	--	--	--	--
	MIDLAND	764	103	--	--	--	--	--
	MIDLAND	783	84	--	--	--	--	--
	MIDLAND	786	120	--	--	--	--	--
	MIDLAND	795	--	111	--	--	--	--

(continued)

TABLE 8. NORTHEASTERN KANSAS IRRIGATED CORN TEST YIELD SUMMARY, 1997-1999.

		1999 YIELD AS % OF TEST AVERAGE [1]			1997-1999		
BRAND	NAME	SHI	RPI	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
MIDLAND	798	--	105	--	--	--	--
MIDLAND	799Bt	100	--	--	--	--	--
MIDLAND	7A04Bt	--	103	--	--	--	--
MIDLAND	7A08	--	102	--	--	--	--
MIDLAND	7E04	--	109	--	--	--	--
MIDLAND	XA130 EXP	86	--	--	--	--	--
MIDLAND	XB140W EXP	--	85	--	--	--	--
MSG	G 8699	100	94	97	--	--	--
MSG	G 8758Bt	104	107	106	--	--	--
MSG	G 8795	127	94	111	--	--	--
MYCOGEN	2888IMI	109	99	104	--	--	--
NC+	4880	--	110	--	--	--	--
NC+	5878B	98	105	102	--	--	--
NC+	6868	101	--	--	--	--	--
NET	1105	85	99	92	--	--	--
NET	1167	107	94	101	--	--	--
NET	1177	115	100	107	--	--	--
PIONEER	33H67	--	99	--	--	--	--
PIONEER	33P66	106	109	107	--	--	--
PIONEER	33R87	--	99	--	--	--	--
PIONEER	34R07	90	--	--	--	--	--
PREMIUM	P265	--	94	--	--	--	--
RENZE	6386	--	109	--	--	--	--
RENZE	6469	--	95	--	--	--	--
RENZE	6480	--	99	--	--	--	--
RENZE	8389BT	--	104	--	--	--	--
RENZE	8418BT	--	103	--	--	--	--
TERRA	TR 1109NE	93	--	--	--	--	--
TERRA	TR 1128	89	--	--	--	--	--
AVERAGES		148	191	169	--	--	--
CV (%)		12	4	--	--	--	--
LSD (0.05)**		14	5	--	--	--	--

1 SHI =Shawnee Co. Test, KS River Valley Exp. Field, Topeka RPI = Republic Co. Test, North Central Exp. Field, Scandia

2 DYA = Differential Yielding Ability; average difference of hybrid yield compared to average of check hybrids in bushels per acre.

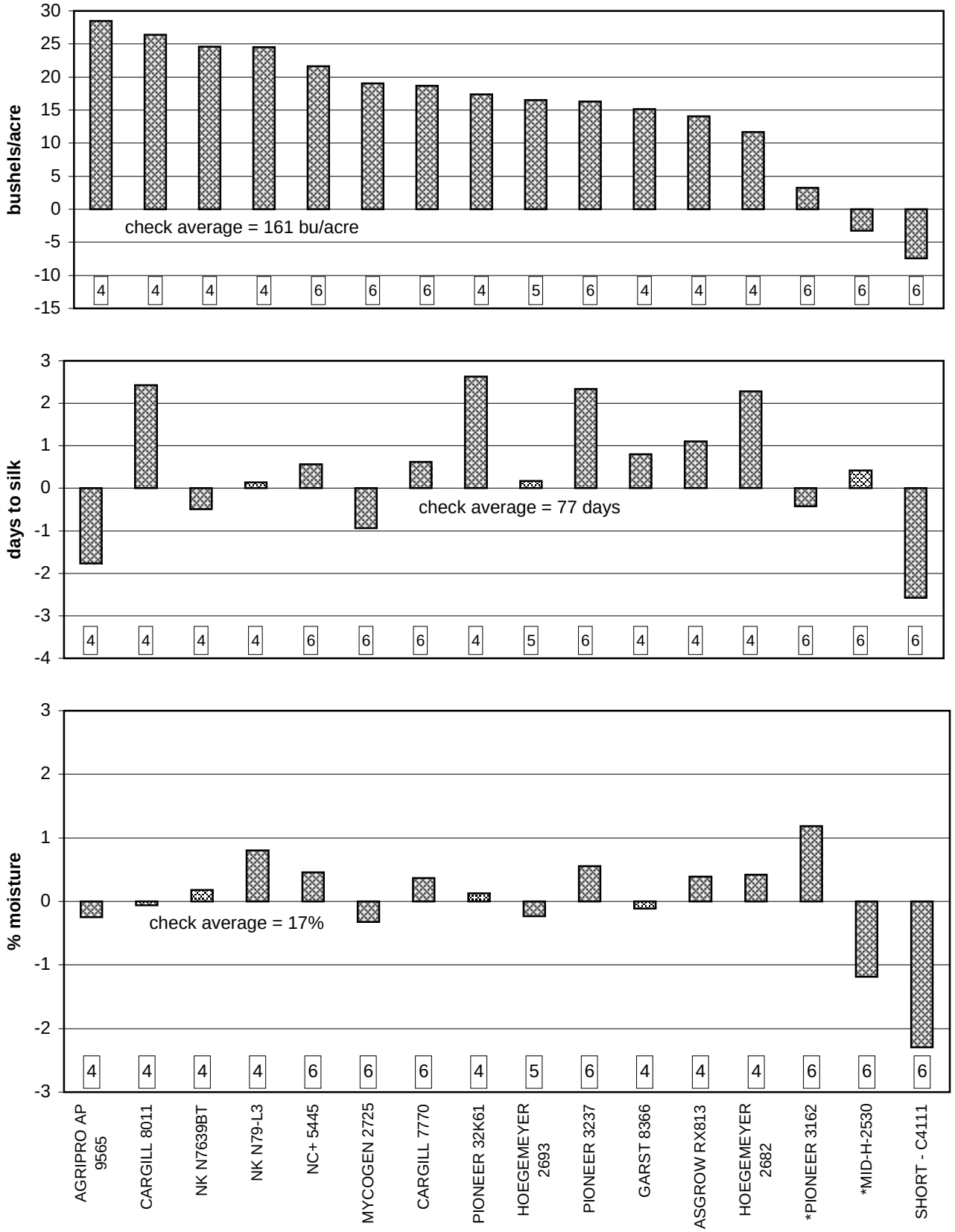
3 SE = Standard Error of DYA; measure of consistency of yield differences.

4 N = Number of tests where hybrid was compared with checks; DYA was calculated only for those with at least 4 comparisons.

c Check hybrid; yield of each hybrid was compared to average yield of these check hybrids.

***** Statistically significantly different from the average of the check hybrids, which = 0 ($P < 0.5$).

Figure 6. Northeastern Kansas irrigated corn hybrid performance summary, 1997-1999.



Bars show differences between hybrid and average of checks*.
Values in boxes are numbers of tests that compared hybrids and checks.

EAST CENTRAL KANSAS STANDARD CORN TEST ON SILTY CLAY LOAM

COUNTY: SHAWNEE

LOCATION: Ron Kramer farm northwest of Topeka

TEST SITE: Silt loam

1998 CROP: Soybean

1997 CROP: Soybean

FERTILIZER (lbs/acre): 125 N 0 P_2O_5 0 K_2O

PLANTING DATE: 5/19/99

HARVEST DATE: 10/12/99

COOPERATORS:

Larry Maddux, agronomist; Charles Clark and William Riley, technicians

TARGET POPULATION: 22,000 plants/acre, 9.5 in. spacing

FINAL STAND (% of target): 99

SILK DATES: 7/22/99 - 7/30/99

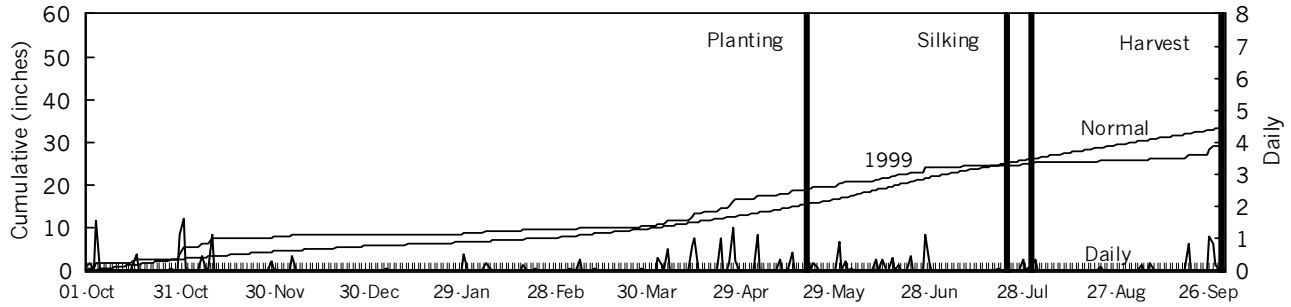
YIELD: **Avg. (bu/a):** 110 **Range (bu/a):** 81 - 134
LSD (bu/a): 25 **CV (%):** 16

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	20	--	0.3	9/7/99

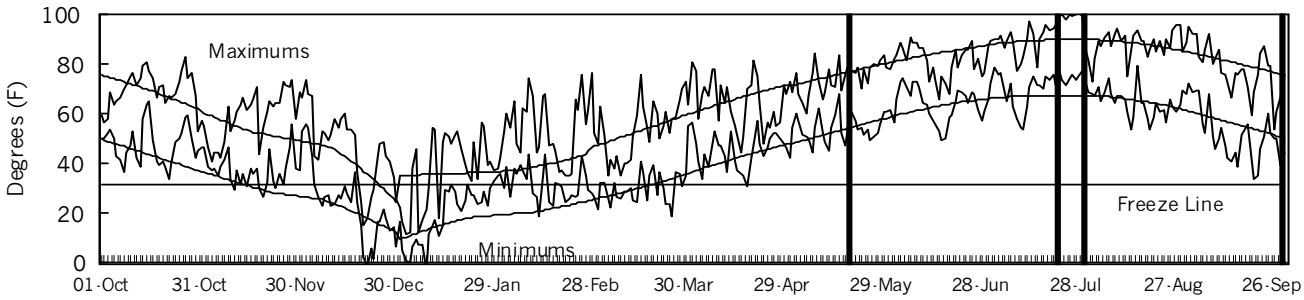
1999 GROWING CONDITONS:

Rains delayed planting and forced planting into a wet seedbed. Resulting stands were not as good as usual, and some plots were affected more than others, causing increased yield variability. However, correlation analysis showed a relatively weak association between stand and yield that was not statistically significant. Below-normal August rainfall may have contributed to yield variability as well.

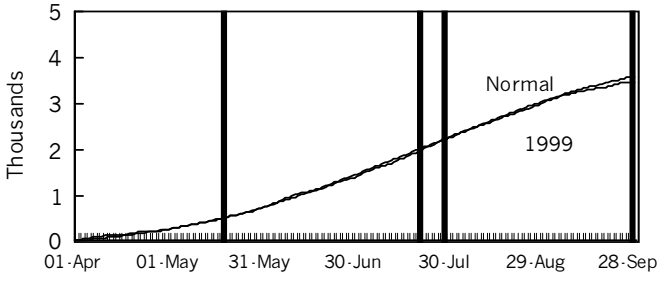
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	6.2	3.2	55	55	241	259
May	4.1	3.9	64	65	459	450
June	3.7	5.3	73	74	666	737
July	0.7	4.0	82	79	873	855
August	0.6	3.6	77	77	770	769
Sept.	3.6	3.4	65	68	474	550
Season Totals	18.9	23.4	69	70	3483	3620

TABLE 9. SHAWNEE CO. DRYLAND CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
PIONEER	33R87	107	176	--	141	--	97	110	--	69	16	64	14	105	2	58
ASGROW	RX730YG	125	--	--	--	--	113	--	--	--	--	64	15	102	1	57
HOEGEMEYER	2668	117	--	--	--	--	106	--	--	--	--	64	15	95	1	57
MATURITY CHECK	SHORT - C4111	87	109	61	98	86	79	69	69	69	14	64	15	104	9	58
NC+	5778	113	--	--	--	--	102	--	--	--	--	64	16	104	0	57
FREEDOM	5503	81	--	--	--	--	74	--	--	--	--	65	16	102	0	57
PIONEER	34K77	104	161	--	133	--	94	101	--	69	17	65	17	104	4	57
DEKALB	DK626Bty	86	--	--	--	--	78	--	--	--	--	66	15	94	1	58
MATURITY CHECK	MID-H-2530	101	147	71	124	106	92	92	80	70	15	66	15	98	1	56
CARGILL	7770	113	--	78	--	--	103	--	88	--	--	66	16	107	0	57
FREEDOM	5680	119	--	--	--	--	108	--	--	--	--	66	16	94	0	55
HOEGEMEYER	2693	119	--	--	--	--	109	--	--	--	--	66	16	110	1	58
MIDLAND	747	109	168	--	139	--	99	106	--	70	17	66	16	81	0	57
TERRA	TR 1128	91	--	--	--	--	83	--	--	--	--	66	16	82	16	58
ASGROW	RX740	122	--	--	--	--	111	--	--	--	--	66	17	101	0	57
TERRA	TR 1167	130	--	--	--	--	118	--	--	--	--	66	17	97	1	57
HOEGEMEYER	2718	104	--	--	--	--	94	--	--	--	--	67	15	97	0	56
GARST	8543Bt/IT	101	--	--	--	--	92	--	--	--	--	67	16	108	0	57
MIDLAND	7A08	88	--	--	--	--	80	--	--	--	--	67	16	103	5	57
MYCOGEN	2828	96	--	--	--	--	87	--	--	--	--	67	16	101	0	57
TERRA	TR 1109NE	123	--	--	--	--	111	--	--	--	--	67	16	103	0	57
ASGROW	RX799Bt	94	--	--	--	--	85	--	--	--	--	67	17	98	0	57
MATURITY CHECK	PIONEER 3162	98	161	78	129	112	89	101	89	70	18	67	17	84	1	57
MIDLAND	786	125	--	--	--	--	113	--	--	--	--	67	18	96	0	54
ASGROW	RX897IMI	132	--	--	--	--	120	--	--	--	--	68	16	92	0	56
NC+	5445	114	169	94	142	126	104	106	106	71	17	68	16	103	1	56
PIONEER	33P66	91	--	--	--	--	83	--	--	--	--	68	16	90	2	57
DEKALB	DK679Bty	134	--	--	--	--	122	--	--	--	--	68	17	101	1	58
GARST	8325Bt	128	--	--	--	--	116	--	--	--	--	68	17	108	0	56
MIDLAND	798	132	--	--	--	--	120	--	--	--	--	68	17	101	1	56
NK	N7639BT	124	164	--	144	--	113	103	--	71	17	68	17	102	0	57
CARGILL	8412	102	207	--	154	--	92	130	--	72	19	69	17	95	0	56
MIDLAND	774	92	165	91	128	116	83	104	103	72	18	69	17	101	0	56
MYCOGEN	2888IMI	119	--	--	--	--	108	--	--	--	--	69	17	109	2	56
NK	N79-L3	110	178	--	144	--	99	112	--	71	18	69	17	108	0	58
HYTEST	BH4748	132	--	--	--	--	119	--	--	--	--	69	18	95	1	54
DELANGE	DS 1997	110	173	--	142	--	100	109	--	72	17	70	16	88	0	56
HYTEST	HT7820	125	--	--	--	--	114	--	--	--	--	70	16	106	0	55
ASGROW	RX889	105	--	--	--	--	95	--	--	--	--	71	18	94	0	54
MIDLAND	795	115	--	--	--	--	105	--	--	--	--	72	17	101	1	56
NC+	5018	96	173	--	135	--	87	109	--	73	17	72	18	80	0	54
AVERAGES		110	159	89	135	119	110	159	89	71	17	67	16	99	1	57
CV (%)		16	8	9	--	--	16	8	9	--	--	4	8	13	381	2
LSD (0.05)**		25	15	10	--	--	22	9	11	--	--	3	NS	NS	NS	2

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

EAST CENTRAL KANSAS STANDARD CORN TEST ON UPLAND SILT LOAM SOIL

COUNTY: FRANKLIN

LOCATION: East Central Kansas Experiment Field, Ottawa

TEST SITE: Woodson silt loam

1998 CROP: Soybean

1997 CROP: Corn

FERTILIZER (lbs/acre): 100 N 0 P_2O_5 0 K_2O

PLANTING DATE: 5/13/99

HARVEST DATE: 9/24/99

COOPERATORS:

Keith Janssen, agronomist; Jim Kimball, technician

TARGET POPULATION: 21,000 plants/acre, 10.0 in. spacing

FINAL STAND (% of target): 109

SILK DATES: 7/22/99 - 7/28/99

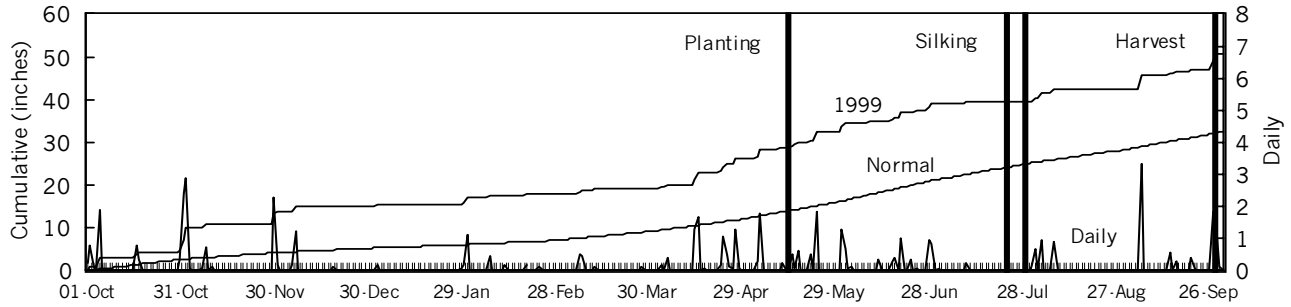
YIELD: **Avg. (bu/a):** 105 **Range (bu/a):** 80 - 123
LSD (bu/a): 11 **CV (%):** 9

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	35	--	0.6	9/9/99

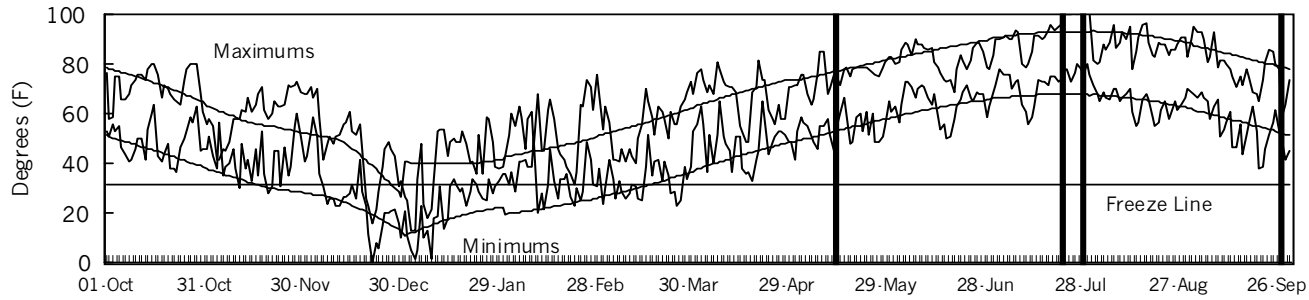
1999 GROWING CONDITONS:

Spring rains delayed planting by several weeks. Continued heavy rains in late May and June didn't inhibit stand establishment but may have reduced the amount of N available for crop growth. A thunderstorm in early July accompanied by strong winds caused some green snap, which is documented in the lodging notes. Above-average temperatures during silking and a 3-week dry spell in August caused additional stress to the test.

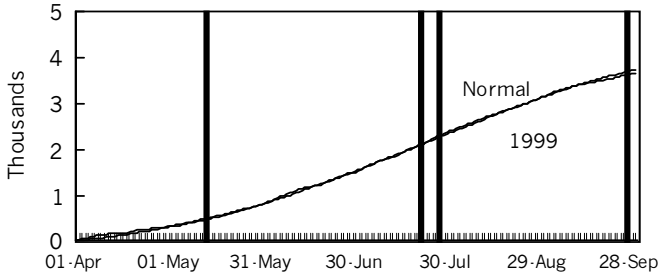
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	7.1	3.0	58	57	304	300
May	7.3	4.1	65	66	487	485
June	5.5	5.0	73	75	694	750
July	0.5	3.9	83	80	898	859
August	2.6	3.1	76	79	768	774
Sept.	8.4	4.1	67	70	512	597
Season Totals	31.4	23.3	70	71	3662	3765

TABLE 10. FRANKLIN CO. CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	80	89	140	84	103	76	65	90	63	14	70	13	112	5	51
US SEEDS	US C1079RR	86	--	--	--	--	82	--	--	--	--	70	15	97	7	54
FREEDOM	5503	107	--	--	--	--	102	--	--	--	--	70	18	112	5	55
US SEEDS	US E1120	98	--	--	--	--	93	--	--	--	--	70	19	109	13	53
US SEEDS	US C1069Bt	89	--	--	--	--	85	--	--	--	--	71	13	107	0	52
US SEEDS	US C1129Bt	90	--	--	--	--	86	--	--	--	--	71	13	114	2	51
US SEEDS	US C1099	101	--	--	--	--	96	--	--	--	--	71	15	104	2	54
US SEEDS	US C1119RR	97	--	--	--	--	93	--	--	--	--	71	17	108	5	53
ASGROW	RX730YG	105	--	--	--	--	100	--	--	--	--	71	18	110	7	55
HOEGEMEYER	2666	102	140	--	121	--	97	102	--	64	16	71	18	114	10	54
MIDLAND	764	103	144	--	124	--	98	105	--	64	16	71	18	113	7	54
MATURITY CHECK	MID-H-2530	108	109	151	109	123	103	80	98	65	15	72	16	107	4	55
DEKALB	DK626Bty	99	--	--	--	--	94	--	--	--	--	72	17	116	0	57
HOEGEMEYER	2668	100	--	--	--	--	96	--	--	--	--	72	17	100	2	55
GARST	8342GLS/IT	110	--	--	--	--	106	--	--	--	--	72	19	113	4	54
HOEGEMEYER	2693	116	148	171	132	145	111	108	111	65	16	72	19	110	3	56
NK	N7590BT	108	141	--	124	--	104	103	--	65	17	72	19	112	2	54
NK	N7639BT	98	135	--	116	--	93	99	--	65	16	72	19	113	3	57
US SEEDS	US C1159	101	--	--	--	--	97	--	--	--	--	72	19	104	3	53
GARST	8325Bt	106	--	--	--	--	102	--	--	--	--	72	20	107	4	54
NK	N79-L3	92	140	--	116	--	88	102	--	65	17	72	20	117	3	56
US SEEDS	US C1129	123	--	--	--	--	117	--	--	--	--	73	16	117	2	56
ASGROW	RX740	107	--	--	--	--	103	--	--	--	--	73	19	100	1	57
MATURITY CHECK	PIONEER 3162	84	120	171	102	125	80	88	110	66	17	73	20	107	2	56
MYCOGEN	2828	100	--	--	--	--	96	--	--	--	--	73	20	115	22	53
NC+	5445	112	141	164	127	139	107	103	106	66	17	73	20	99	6	55
CARGILL	7770	117	133	174	125	141	112	97	112	66	18	73	21	109	1	54
MIDLAND	747	95	133	--	114	--	91	98	--	67	16	74	18	105	14	55
NC+	5018	116	134	--	125	--	110	98	--	66	16	74	18	102	1	56
PIONEER	33A14	100	144	--	122	--	96	106	--	66	16	74	18	111	3	56
PIONEER	3237	120	141	175	130	145	114	103	113	67	17	74	19	106	0	57
US SEEDS	US C1139RR	99	--	--	--	--	95	--	--	--	--	74	20	114	0	55
ASGROW	RX799Bt	115	--	--	--	--	109	--	--	--	--	74	21	112	0	54
HOEGEMEYER	2730	115	--	--	--	--	110	--	--	--	--	74	21	105	0	52
MIDLAND	786	108	--	--	--	--	103	--	--	--	--	74	21	109	3	51
MYCOGEN	2888IMI	115	--	--	--	--	110	--	--	--	--	74	21	111	4	55
TERRA	TR 1157	116	134	140	125	130	111	98	90	68	17	74	21	113	2	52
PIONEER	31B13	101	--	--	--	--	96	--	--	--	--	75	20	106	2	55
DEKALB	DK679Bty	110	--	--	--	--	105	--	--	--	--	75	21	108	3	56
MIDLAND	XA160 EXP	117	--	--	--	--	112	--	--	--	--	75	21	113	0	55
TRIUMPH	1866	108	144	--	126	--	104	105	--	68	18	75	21	106	3	54
MIDLAND	798	106	127	--	117	--	102	93	--	68	18	75	22	113	1	54
TERRA	TR 1167	110	--	--	--	--	105	--	--	--	--	75	22	106	1	53
FREEDOM	5680	104	140	--	122	--	99	103	--	68	18	75	23	110	2	51
ASGROW	RX889	110	--	--	--	--	105	--	--	--	--	76	21	110	0	54
DELANGE	DS 1997	107	138	158	122	134	102	101	102	69	17	76	21	94	2	54
DEKALB	DK697	106	--	--	--	--	101	--	--	--	--	76	22	102	4	52
ASGROW	RX897IMI	105	--	--	--	--	100	--	--	--	--	76	23	108	1	52
AVERAGES		105	137	155	121	132	105	137	155	66	16	73	19	109	4	54
CV (%)		9	9	8	--	--	8	9	8	--	--	1	4	5	84	1
LSD (0.05)**		11	14	15	--	--	10	10	9	--	--	1	1	6	4	1

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

SOUTHEASTERN KANSAS STANDARD CORN TEST ON RIVER-BOTTOM SOIL

COUNTY: NEOSHO

LOCATION: Private farm south of Erie

TEST SITE: Lanton silt loam

1998 CROP: Soybean

1997 CROP: Soybean

FERTILIZER (lbs/acre): 200 N 50 P_2O_5 62 K_2O

PLANTING DATE: 5/28/99

HARVEST DATE: 9/23/99

COOPERATORS:

James Long, agronomist

TARGET POPULATION: 24,000 plants/acre, 8.7 in. spacing

FINAL STAND (% of target): 101

SILK DATES: 7/21/99 - 7/31/99

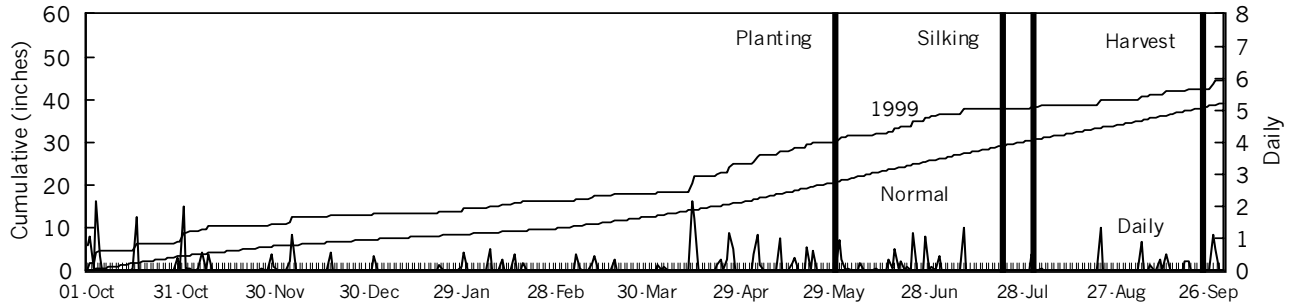
YIELD: **Avg. (bu/a):** 102 **Range (bu/a):** 86 - 130
LSD (bu/a): 18 **CV (%):** 15

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	100	0	10.3	9/9/99

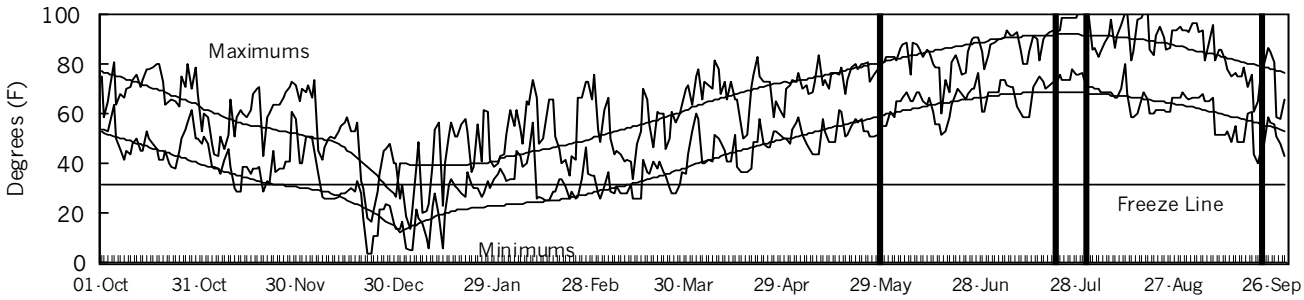
1999 GROWING CONDITONS:

Continued heavy rains delayed planting for nearly 2 months. Stands were generally good, but water-logged conditions along one side of the test in June and early July introduced significant yield variability. Dry conditions after mid-July stressed the test even more. A heavy European corn borer infestation likely contributed to the lodging observed at harvest and may have reduced yields and increased variability still more. No insecticide was applied.

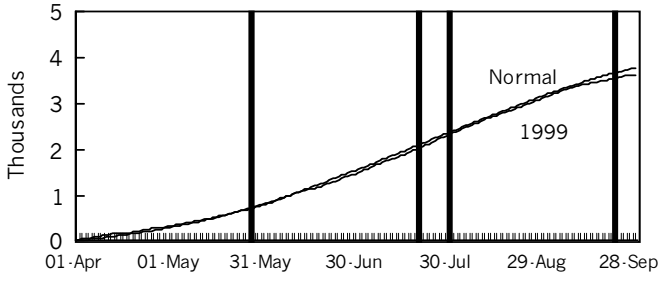
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	7.1	3.7	58	57	304	289
May	6.2	4.8	64	66	455	491
June	4.8	5.1	73	75	686	761
July	2.3	4.5	81	80	872	873
August	1.5	3.9	79	78	805	785
Sept.	4.4	4.5	68	70	516	605
Season Totals	26.3	26.4	71	71	3636	3804

TABLE 11. NEOSHO CO. CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	95	138	181	116	138	93	85	87	60	14	54	17	109	2	54
MATURITY CHECK	PIONEER 3162	86	172	222	129	160	84	106	106	61	17	55	21	92	2	55
NK	N7639BT	94	161	--	127	--	92	99	--	61	17	55	22	99	2	54
MATURITY CHECK	MID-H-2530	97	149	199	123	148	95	92	95	61	15	56	19	105	2	54
HOEGEMEYER	2668	103	--	--	--	--	101	--	--	--	--	56	20	99	3	54
MYCOGEN	2787	114	--	--	--	--	112	--	--	--	--	56	22	97	1	53
PIONEER	33A14	108	173	--	140	--	106	106	--	61	17	56	22	103	1	53
GARST	8543Bt/IT	99	--	--	--	--	97	--	--	--	--	57	21	104	1	54
GARST	8300GLS/IT	86	--	--	--	--	85	--	--	--	--	57	21	92	1	53
NK	N83-N5	106	177	--	142	--	104	109	--	62	17	57	22	109	1	54
HOEGEMEYER	2650	96	172	--	134	--	94	106	--	62	15	58	19	104	2	54
DEKALB	DK626Bty	116	--	--	--	--	113	--	--	--	--	58	20	101	0	54
MIDLAND	764	93	--	--	--	--	91	--	--	--	--	58	20	103	2	54
ASGROW	RX730YG	93	--	--	--	--	91	--	--	--	--	58	21	97	4	54
FREEDOM	5503	92	--	--	--	--	91	--	--	--	--	58	21	105	4	54
NK	N79-L3	96	175	--	135	--	94	107	--	62	17	58	21	100	0	56
TERRA	TR 1166Bt	101	--	--	--	--	99	--	--	--	--	58	22	108	1	54
ASGROW	RX799Bt	111	--	--	--	--	109	--	--	--	--	58	23	98	4	53
NC+	5999	99	--	--	--	--	97	--	--	--	--	58	24	107	1	52
GARST	8342GLS/IT	97	--	--	--	--	95	--	--	--	--	59	22	104	2	54
CARGILL	7770	95	163	216	129	158	93	100	103	63	17	59	23	103	1	53
TERRA	TR 1167	130	--	--	--	--	128	--	--	--	--	59	23	105	3	53
ASGROW	RX889	107	--	--	--	--	105	--	--	--	--	59	24	97	2	52
HOEGEMEYER	2693	93	--	--	--	--	91	--	--	--	--	59	25	103	3	53
NC+	5018	108	175	--	141	--	105	107	--	64	16	60	21	96	2	53
PIONEER	3237	102	178	--	140	--	100	109	--	64	17	60	21	107	1	55
TRIUMPH	1866	110	182	--	146	--	108	112	--	65	17	60	21	106	3	54
CARGILL	8412	102	175	--	138	--	100	107	--	65	17	60	22	104	3	54
MIDLAND	798	119	--	--	--	--	116	--	--	--	--	60	22	100	0	54
ASGROW	RX740	108	--	--	--	--	106	--	--	--	--	60	23	97	1	55
DELANGE	DS 1997	116	162	226	139	168	114	99	108	65	17	60	23	98	2	52
PIONEER	31B13	114	206	--	160	--	112	127	--	65	18	60	24	100	1	53
HOEGEMEYER	2761	99	--	--	--	--	97	--	--	--	--	60	25	101	0	52
DEKALB	DK679Bty	94	--	--	--	--	92	--	--	--	--	61	22	111	3	53
ASGROW	RX897IMI	108	--	--	--	--	106	--	--	--	--	61	25	99	2	51
MIDLAND	786	95	173	--	134	--	93	106	--	65	19	61	25	93	1	52
TERRA	TR 1157	114	182	193	148	163	112	112	92	66	17	62	21	100	1	53
DELANGE	DS 1995	107	143	184	125	145	105	88	88	66	17	62	23	98	1	53
MYCOGEN	2888IMI	93	--	--	--	--	91	--	--	--	--	63	23	99	4	53
MIDLAND	XA160 EXP	87	--	--	--	--	86	--	--	--	--	63	25	103	2	53
FREEDOM	5680	100	--	--	--	--	98	--	--	--	--	64	26	100	2	50
AVERAGES		102	163	209	132	158	102	163	209	63	17	59	22	101	2	53
CV (%)		15	8	8	--	--	15	8	8	--	--	4	9	9	150	2
LSD (0.05)**		18	15	21	--	--	18	9	10	--	--	3	2	NS	NS	1

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

SOUTH CENTRAL KANSAS CORN TEST, MIN-TILL DRYLAND

COUNTY: HARVEY

LOCATION: Harvey County Experiment Field, Hesston

TEST SITE: Ladysmith silty clay loam

1998 CROP: Wheat

1997 CROP: Grain sorghum

FERTILIZER (lbs/acre): 125 N 37 P_2O_5 0 K_2O

PLANTING DATE: 5/7/99

HARVEST DATE: 9/2/99

COOPERATORS:

Mark Claassen, agronomist; Kevin Duerksen and Lowell Stucky, technicians

TARGET POPULATION: 23,000 plants/acre, 9.1 in. spacing

FINAL STAND (% of target): 117

SILK DATES: 7/3/99 - 7/12/99

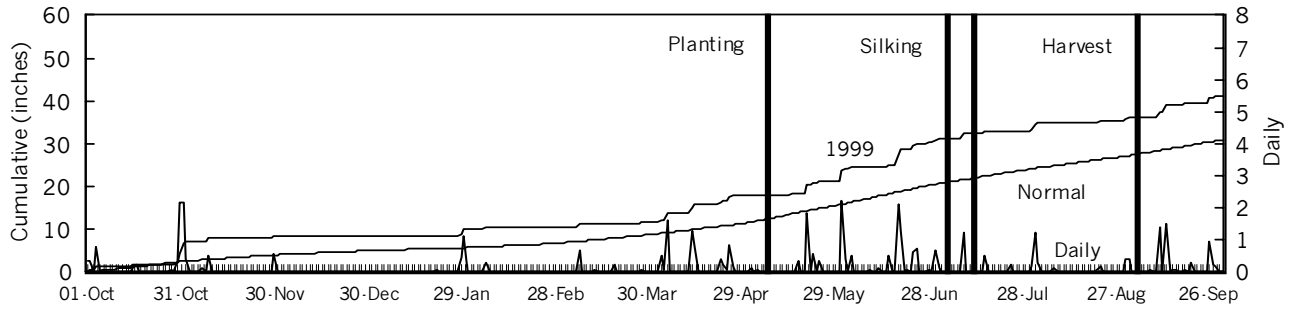
YIELD: **Avg. (bu/a):** 86 **Range (bu/a):** 69 - 103
LSD (bu/a): 8 **CV (%):** 8

CORN BORERS:	Infestation (% plants) ECB	SWCB	Tunnels (in./plant)	Sample date
(susc. hybrid)	--	--	--	--

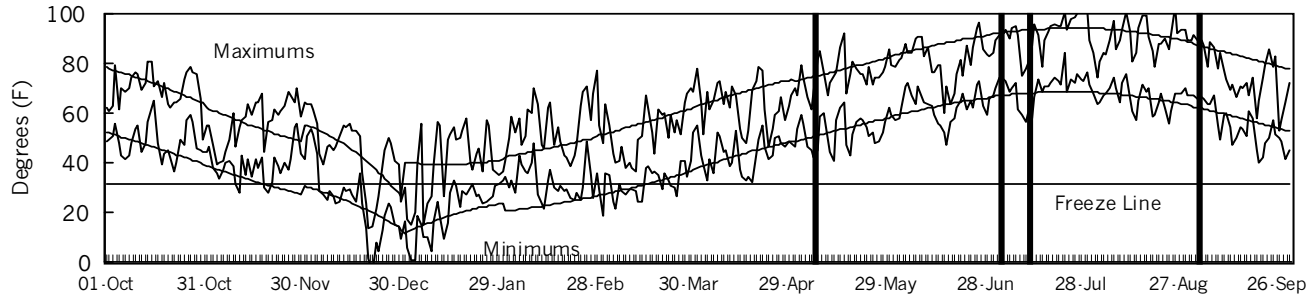
1999 GROWING CONDITONS:

Wet conditions in April delayed planting until May 7. Final populations were higher than anticipated, even though temperatures were below normal and rainfall was above normal early in the season. Below-average rainfall coupled with high temperatures in July caused drought stress that limited yields. No disease or insect pests were noted.

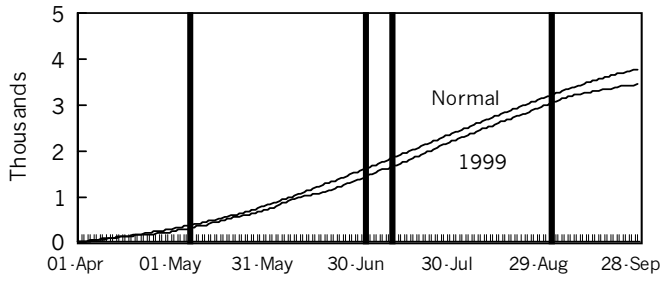
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1999	Precipitation Normal	Average Temp. 1999	Average Temp. Normal	GDD 1999	GDD Normal
April	6.2	2.7	54	57	219	294
May	5.7	4.3	64	66	467	484
June	7.3	4.8	72	76	651	762
July	2.4	3.6	81	81	859	870
August	2.8	2.9	78	79	796	786
Sept.	5.1	3.7	65	71	465	614
Season Totals	29.4	22.1	69	72	3456	3809

TABLE 12. HARVEY CO. CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
DEKALB	DK579	89	--	--	--	--	103	--	--	--	--	57	13	116	2	56
GARST	8539BLT	90	--	--	--	--	104	--	--	--	--	58	14	117	0	57
ASGROW	RX638YG	72	--	--	--	--	83	--	--	--	--	59	12	115	1	54
MATURITY CHECK	SHORT - C4111	78	--	--	--	--	90	--	--	--	--	59	12	117	0	55
DEKALB	DK595Bty	89	--	--	--	--	103	--	--	--	--	60	13	123	1	55
MATURITY CHECK	MID-H-2530	93	--	--	--	--	108	--	--	--	--	62	13	113	0	58
PIONEER	3563	85	--	--	--	--	98	--	--	--	--	62	13	113	0	59
ASGROW	RX799Bt	79	--	--	--	--	91	--	--	--	--	62	14	117	0	57
GARST	8543Bt/IT	76	--	--	--	--	89	--	--	--	--	62	14	127	0	58
ASGROW	RX740	85	--	--	--	--	99	--	--	--	--	62	15	107	1	59
PIONEER	33V08	82	--	--	--	--	95	--	--	--	--	63	14	121	1	58
ASGROW	RX738RR	84	--	--	--	--	97	--	--	--	--	63	15	115	2	58
MIDLAND	785RR	89	--	--	--	--	103	--	--	--	--	63	15	110	1	58
CARGILL	7770	72	--	--	--	--	83	--	--	--	--	64	14	123	0	56
ASGROW	RX686RR/YG	69	--	--	--	--	80	--	--	--	--	64	15	124	0	55
MIDLAND	7A08	99	--	--	--	--	115	--	--	--	--	64	15	118	0	58
MYCOGEN	2787	91	--	--	--	--	106	--	--	--	--	64	15	118	0	57
MIDLAND	7A04Bt	86	--	--	--	--	100	--	--	--	--	65	15	123	2	57
MYCOGEN	2888IMI	103	--	--	--	--	120	--	--	--	--	65	16	123	0	56
PIONEER	31B13	100	--	--	--	--	116	--	--	--	--	65	16	118	3	58
CARGILL	8412	101	--	--	--	--	117	--	--	--	--	65	19	111	0	54
MATURITY CHECK	PIONEER 3162	78	--	--	--	--	90	--	--	--	--	66	16	114	0	58
MIDLAND	798	98	--	--	--	--	114	--	--	--	--	66	17	118	1	56
MIDLAND	786	79	--	--	--	--	92	--	--	--	--	66	18	116	0	52
TRIUMPH	2010	88	--	--	--	--	103	--	--	--	--	66	18	116	1	54
AVERAGES		86	--	--	--	--	86	--	--	--	--	63	15	117	1	56
CV (%)		8	--	--	--	--	8	--	--	--	--	2	5	4	237	1
LSD (0.05)**		8	--	--	--	--	9	--	--	--	--	1	1	5	2	1

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

TABLE 13. EASTERN KANSAS CORN TEST YIELD SUMMARY, 1997-1999.

			1999 YIELD AS % OF TEST AVERAGE [1]					1997-1999		
	BRAND	NAME	SHD	FRD	NOD	HVD	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
	PIONEER	31B13	--	96	112	116	--	22	9	4
	TRIUMPH	1866	--	104	108	--	--	20 *	3	4
	CARGILL	8412	92	--	100	117	--	19	9	5
	MIDLAND	798	120	102	116	114	113	19 *	5	5
	PIONEER	3237	--	114	100	--	--	18 *	3	6
	HOEGEMEYER	2693	108	111	91	--	--	17 *	5	5
	PIONEER	33A14	--	96	106	--	--	17 *	4	5
	NC+	5445	104	107	--	--	--	16 *	3	6
	FREEDOM	5680	108	99	98	--	--	15 *	4	4
	MYCOGEN	2888IMI	108	110	91	120	107	14 *	4	4
	NC+	5018	87	110	105	--	--	14 *	4	6
	ASGROW	RX740	111	103	106	99	105	13	5	4
	DELANGE	DS 1997	100	102	114	--	--	13 *	4	8
	NK	N79-L3	99	88	94	--	--	12 *	5	6
	MIDLAND	786	113	103	93	92	100	10	5	5
	NK	N7639BT	113	93	92	--	--	10	4	6
	CARGILL	7770	103	112	93	83	98	7	3	9
	ASGROW	RX799Bt	85	109	109	91	99	6	7	4
	MIDLAND	747	99	91	--	--	--	6	6	5
	TERRA	TR 1157	--	111	112	--	--	5	10	5
c	MATURITY CHECK	PIONEER 3162	89	80	84	90	86	2	3	10
c	MATURITY CHECK	MID-H-2530	92	103	95	108	100	-2	3	10
	DELANGE	DS 1995	--	--	105	--	--	-5	7	6
	MATURITY CHECK	SHORT - C4111	79	76	93	90	85	-19 *	4	10
	ASGROW	RX638YG	--	--	--	83	--	--	--	--
	ASGROW	RX686RR/YG	--	--	--	80	--	--	--	--
	ASGROW	RX730YG	113	100	91	--	--	--	--	--
	ASGROW	RX738RR	--	--	--	97	--	--	--	--
	ASGROW	RX889	95	105	105	--	--	--	--	--
	ASGROW	RX897IMI	120	100	106	--	--	--	--	--
	DEKALB	DK579	--	--	--	103	--	--	--	--
	DEKALB	DK595Bty	--	--	--	103	--	--	--	--
	DEKALB	DK626Bty	78	94	113	--	--	--	--	--
	DEKALB	DK679Bty	122	105	92	--	--	--	--	--
	DEKALB	DK697	--	101	--	--	--	--	--	--
	FREEDOM	5503	74	102	91	--	--	--	--	--
	GARST	8300GLS/IT	--	--	85	--	--	--	--	--
	GARST	8325Bt	116	102	--	--	--	--	--	--
	GARST	8342GLS/IT	--	106	95	--	--	--	--	--
	GARST	8539BLT	--	--	--	104	--	--	--	--
	GARST	8543Bt/IT	92	--	97	89	--	--	--	--
	HOEGEMEYER	2650	--	--	94	--	--	--	--	--
	HOEGEMEYER	2666	--	97	--	--	--	--	--	--
	HOEGEMEYER	2668	106	96	101	--	--	--	--	--
	HOEGEMEYER	2718	94	--	--	--	--	--	--	--

(continued)

TABLE 13. EASTERN KANSAS CORN TEST YIELD SUMMARY, 1997-1999.

		1999 YIELD AS % OF TEST AVERAGE [1]					1997-1999		
BRAND	NAME	SHD	FRD	NOD	HVD	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
HOEGEMEYER	2730	--	110	--	--	--	--	--	--
HOEGEMEYER	2761	--	--	97	--	--	--	--	--
HYTEST	BH4748	119	--	--	--	--	--	--	--
HYTEST	HT7820	114	--	--	--	--	--	--	--
MIDLAND	764	--	98	91	--	--	--	--	--
MIDLAND	774	83	--	--	--	--	--	--	--
MIDLAND	785RR	--	--	--	103	--	--	--	--
MIDLAND	795	105	--	--	--	--	--	--	--
MIDLAND	7A04Bt	--	--	--	100	--	--	--	--
MIDLAND	7A08	80	--	--	115	--	--	--	--
MIDLAND	XA160 EXP	--	112	86	--	--	--	--	--
MYCOGEN	2787	--	--	112	106	--	--	--	--
MYCOGEN	2828	87	96	--	--	--	--	--	--
NC+	5778	102	--	--	--	--	--	--	--
NC+	5999	--	--	97	--	--	--	--	--
NK	N7590BT	--	104	--	--	--	--	--	--
NK	N83-N5	--	--	104	--	--	--	--	--
PIONEER	33P66	83	--	--	--	--	--	--	--
PIONEER	33R87	97	--	--	--	--	--	--	--
PIONEER	33V08	--	--	--	95	--	--	--	--
PIONEER	34K77	94	--	--	--	--	--	--	--
PIONEER	3563	--	--	--	98	--	--	--	--
TERRA	TR 1109NE	111	--	--	--	--	--	--	--
TERRA	TR 1128	83	--	--	--	--	--	--	--
TERRA	TR 1166Bt	--	--	99	--	--	--	--	--
TERRA	TR 1167	118	105	128	--	--	--	--	--
TRIUMPH	2010	--	--	--	103	--	--	--	--
US SEEDS	US C1069Bt	--	85	--	--	--	--	--	--
US SEEDS	US C1079RR	--	82	--	--	--	--	--	--
US SEEDS	US C1099	--	96	--	--	--	--	--	--
US SEEDS	US C1119RR	--	93	--	--	--	--	--	--
US SEEDS	US C1129	--	117	--	--	--	--	--	--
US SEEDS	US C1129Bt	--	86	--	--	--	--	--	--
US SEEDS	US C1139RR	--	95	--	--	--	--	--	--
US SEEDS	US C1159	--	97	--	--	--	--	--	--
US SEEDS	US E1120	--	93	--	--	--	--	--	--
AVERAGES		110	105	102	86	101	--	--	--
CV (%)		16	8	15	8	--	--	--	--
LSD (0.05)**		22	10	18	9	--	--	--	--

1 SHD = Shawnee Co., Rossville FRD = Franklin Co., Ottawa NOD = Neosho Co., Erie HVD = Harvey Co., Hesston

2 DYA = Differential Yielding Ability; average difference of hybrid yield compared to average of check hybrids in bushels per acre.

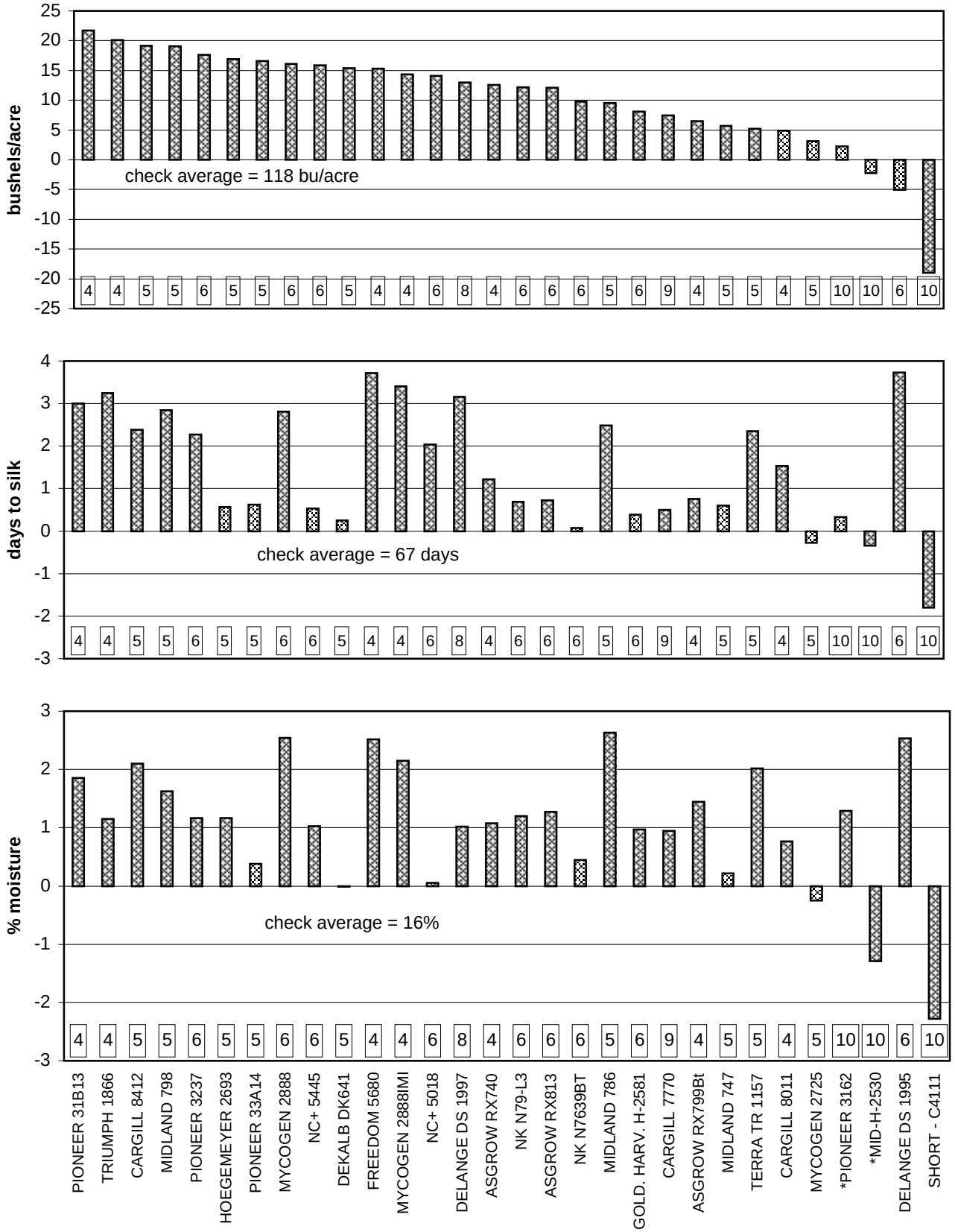
3 SE = Standard Error of DYA; measure of consistency of yield differences.

4 N = Number of tests where hybrid was compared with checks; DYA was calculated only for those with at least 4 comparisons.

c Check hybrid; yield of each hybrid was compared to average yield of these check hybrids.

***** Statistically significantly different from the average of the check hybrids, which = 0 ($P < 0.5$).

Figure 7. Eastern Kansas corn hybrid performance summary, 1997-1999.



Bars show differences between hybrid and average of checks*.
Values in boxes are numbers of tests that compared hybrids and checks.

NORTH CENTRAL KANSAS STANDARD CORN TEST, NO-TILL DRYLAND

COUNTY: ELLIS

LOCATION: KSU Agricultural Research Center - Hays

TEST SITE: Harney clay loam

1998 CROP: Fallow

1997 CROP: Sorghum

FERTILIZER (lbs/acre): 60 N 0 P_2O_5 0 K_2O

PLANTING DATE: 4/29/99

HARVEST DATE: 9/30/99

COOPERATORS:

Ken Kofoid, agronomist

TARGET POPULATION: 15,000 plants/acre, 13.9 in. spacing

FINAL STAND (% of target): 122

SILK DATES: 7/12/99 - 7/18/99

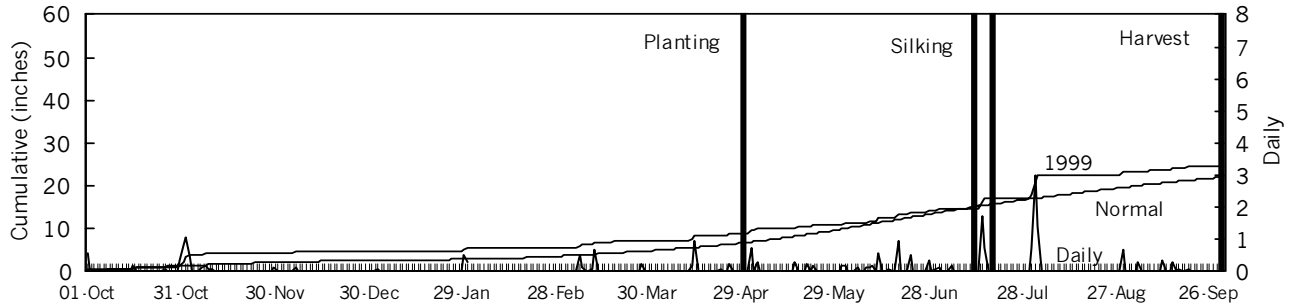
YIELD: **Avg. (bu/a):** 110 **Range (bu/a):** 88 - 133
LSD (bu/a): 12 **CV (%):** 9

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	15	100	13.6	9/10/99

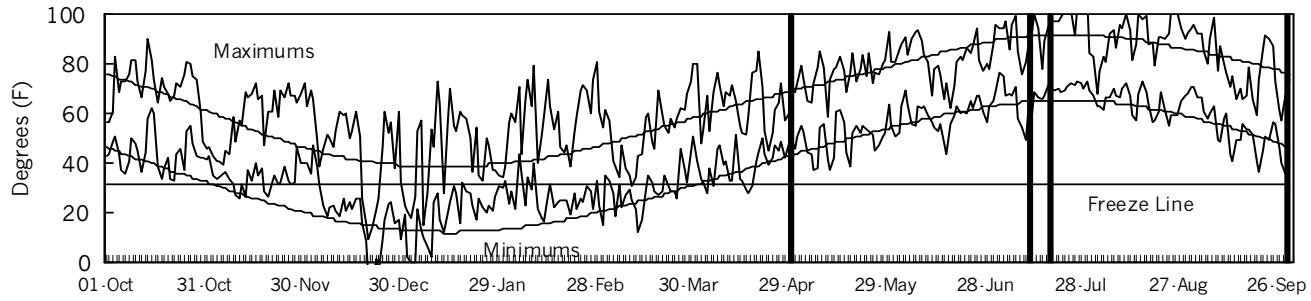
1999 GROWING CONDITONS:

Good stands and above-average rainfall contributed to excellent dryland corn yields. Corn borers, primarily southwestern, caused some damage and likely contributed to the lodged plants and dropped ears. No insecticide was applied.

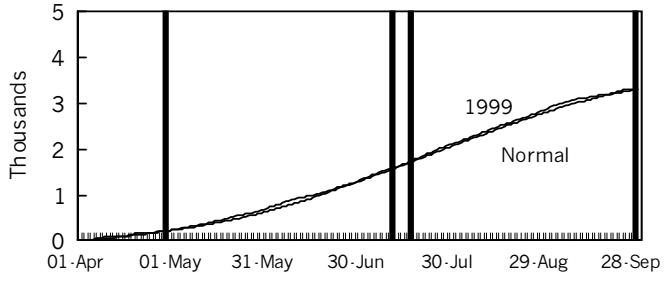
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	1.6	2.0	52	51	217	225
May	2.1	3.1	63	62	460	386
June	3.4	3.9	71	72	600	675
July	3.6	3.3	81	78	826	811
August	5.2	2.7	78	76	764	728
Sept.	1.2	2.1	65	67	466	521
Season Totals	17.1	17.0	68	68	3333	3345

TABLE 14. ELLIS CO. CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
PIONEER	35P12	100	--	--	--	--	91	--	--	--	--	74	14	119	7	58
US SEEDS	US C1079RR	93	--	--	--	--	84	--	--	--	--	76	14	120	3	59
MATURITY CHECK	PIONEER 3162	119	93	--	106	--	109	94	--	77	18	76	20	117	6	58
ASGROW	RX738RR	110	--	--	--	--	100	--	--	--	--	77	16	118	13	58
DEKALB	DK595Bty	118	--	--	--	--	107	--	--	--	--	77	17	132	0	59
US SEEDS	US C1139RR	111	--	--	--	--	101	--	--	--	--	77	17	116	10	60
TRIUMPH	2010	107	--	--	--	--	98	--	--	--	--	77	20	124	2	56
ASGROW	RX638YG	112	--	--	--	--	102	--	--	--	--	78	15	119	1	58
US SEEDS	US C1119RR	88	--	--	--	--	80	--	--	--	--	78	16	118	5	56
US SEEDS	US C1129Bt	103	--	--	--	--	93	--	--	--	--	78	17	116	0	58
GARST	8543Bt/IT	129	--	--	--	--	118	--	--	--	--	78	18	125	3	56
MIDLAND	786	94	105	--	99	--	86	106	--	81	18	78	19	120	4	55
CARGILL	8412	116	--	--	--	--	105	--	--	--	--	78	20	122	2	55
CARGILL	7770	103	--	--	--	--	93	--	--	--	--	78	20	122	4	59
MIDLAND	798	122	104	--	113	--	111	106	--	82	19	78	20	125	4	56
DEKALB	DK579	113	--	--	--	--	103	--	--	--	--	79	15	136	4	60
GARST	8560IT	106	--	--	--	--	96	--	--	--	--	79	15	130	8	57
ASGROW	RX740	118	--	--	--	--	107	--	--	--	--	79	16	126	11	60
PIONEER	34R07	129	--	--	--	--	117	--	--	--	--	79	16	127	1	59
US SEEDS	US C1099	92	--	--	--	--	84	--	--	--	--	79	16	124	4	58
MYCOGEN	2787	119	--	--	--	--	108	--	--	--	--	79	17	120	7	56
US SEEDS	US C1159	101	--	--	--	--	91	--	--	--	--	79	19	121	6	56
MATURITY CHECK	SHORT - C4111	91	83	--	87	--	83	84	--	76	13	80	14	119	3	58
MATURITY CHECK	MID-H-2530	114	104	--	109	--	104	106	--	78	13	80	15	127	6	59
ASGROW	RX686RR/YG	113	--	--	--	--	103	--	--	--	--	80	17	120	0	56
GARST	8539BLT	124	--	--	--	--	113	--	--	--	--	80	17	128	0	59
US SEEDS	US C1069Bt	109	--	--	--	--	99	--	--	--	--	80	17	116	1	58
US SEEDS	US C1129	103	--	--	--	--	93	--	--	--	--	80	18	117	7	59
MIDLAND	7A08	110	--	--	--	--	100	--	--	--	--	80	19	119	4	57
ASGROW	RX799Bt	133	114	--	123	--	120	115	--	78	19	80	20	126	0	56
AVERAGES		110	99	--	104	--	110	99	--	77	16	78	17	122	4	58
CV (%)		9	8	--	--	--	9	8	--	--	--	1	5	11	92	3
LSD (0.05)**		12	10	--	--	--	11	10	--	--	--	1	1	NS	4	2

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

NORTHWESTERN KANSAS STANDARD CORN TEST, NO-TILL DRYLAND

COUNTY: THOMAS

LOCATION: Northwest Research-Extension Center, Colby

TEST SITE: Keith silt loam

1998 CROP: Wheat

1997 CROP: Fallow

FERTILIZER (lbs/acre): 110 N 40 P_2O_5 0 K_2O

PLANTING DATE: 5/5/99

HARVEST DATE: 10/12/99

COOPERATORS:

Patrick Evans, agronomist

TARGET POPULATION: 15,000 plants/acre, 13.9 in. spacing

FINAL STAND (% of target): 114

SILK DATES: 7/17/99 - 7/27/99

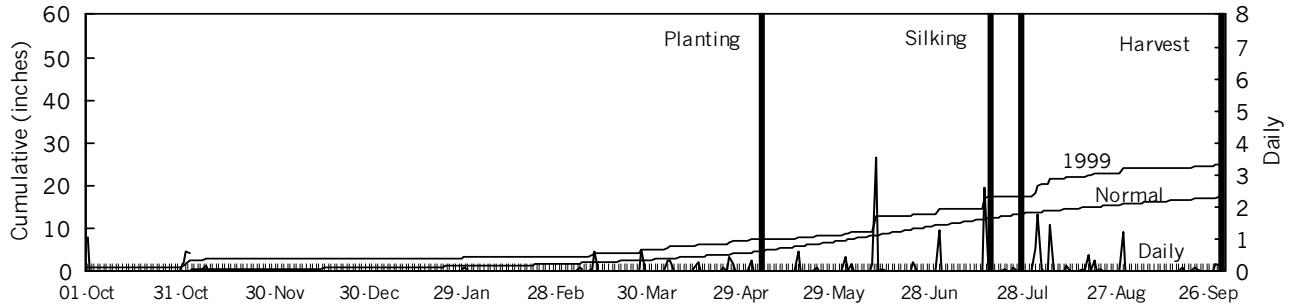
YIELD: **Avg. (bu/a):** 153 **Range (bu/a):** 133 - 178
LSD (bu/a): 15 **CV (%):** 8

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	80	0	2.8	9/24/99

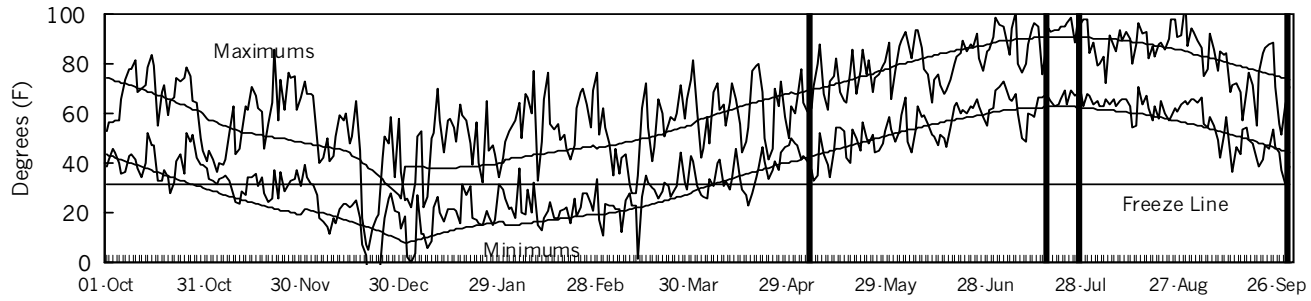
1999 GROWING CONDITONS:

Favorable planting conditions resulted in good stands. Above-normal rainfall for much of the growing season contributed to very high yields. European corn borers were present in susceptible hybrids and may have contributed to some of the minimal lodging noted at harvest. No insecticide was applied.

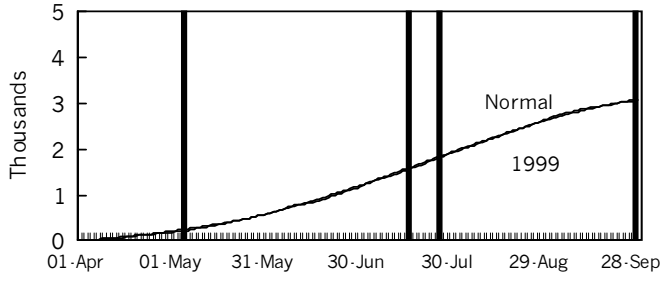
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	2.0	1.5	48	50	171	209
May	1.3	2.9	60	60	386	353
June	5.0	3.6	70	71	574	631
July	4.2	3.1	78	77	774	775
August	6.6	2.0	76	74	739	683
Sept.	0.8	1.6	63	65	429	466
Season Totals	20.0	14.6	66	66	3072	3116

TABLE 15. THOMAS CO. DRYLAND CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
PIONEER	36D14	137	--	--	--	--	89	--	--	--	--	73	13	115	0	57
PIONEER	35P12	150	--	--	--	--	97	--	--	--	--	75	15	117	0	56
MATURITY CHECK	SHORT - C4111	133	131	71	132	112	86	90	81	76	12	76	11	117	0	58
US SEEDS	US C1079RR	156	--	--	--	--	102	--	--	--	--	76	14	117	0	57
ASGROW	RX638YG	143	--	--	--	--	93	--	--	--	--	76	16	115	0	55
DEKALB	DK579	160	--	--	--	--	104	--	--	--	--	76	17	94	0	57
ASGROW	RX686RR/YG	165	--	--	--	--	108	--	--	--	--	76	18	118	1	54
US SEEDS	US E1120	144	--	--	--	--	94	--	--	--	--	76	19	115	0	55
US SEEDS	US C1129Bt	141	--	--	--	--	92	--	--	--	--	77	15	115	0	56
PIONEER	34R07	159	--	--	--	--	104	--	--	--	--	77	16	115	2	57
MILLER PREF.	MP-1123	157	--	--	--	--	102	--	--	--	--	77	18	116	0	56
NC+	4880	154	--	89	--	--	101	--	102	--	--	77	18	116	1	55
US SEEDS	US C1119RR	167	--	--	--	--	109	--	--	--	--	77	18	114	0	54
NK	N59-Q9	136	--	--	--	--	89	--	--	--	--	78	14	122	0	56
US SEEDS	US C1099	144	--	--	--	--	94	--	--	--	--	78	14	118	2	56
NK	N67-H6	168	--	--	--	--	110	--	--	--	--	78	17	119	0	56
CARGILL	6888	168	156	--	162	--	109	108	--	78	18	78	18	120	0	55
KAYSTAR	KX - 790	142	--	--	--	--	92	--	--	--	--	78	18	100	0	53
OTTILIE	2467	178	--	--	--	--	116	--	--	--	--	78	18	122	0	55
US SEEDS	US C1069Bt	141	--	--	--	--	92	--	--	--	--	78	18	99	0	54
MYCOGEN	2787	159	--	--	--	--	103	--	--	--	--	78	19	117	0	54
OTTLIE	5177RRBt	164	--	--	--	--	107	--	--	--	--	78	19	124	1	54
TRIUMPH	1141	157	151	--	154	--	102	104	--	78	18	78	19	100	0	55
OTTILIE	5480	156	--	--	--	--	102	--	--	--	--	78	21	116	0	55
DEKALB	DK595Bty	149	--	--	--	--	97	--	--	--	--	79	17	115	0	56
ASGROW	RX740	152	--	--	--	--	99	--	--	--	--	79	18	124	0	57
NC+	4616	160	156	72	158	129	104	108	82	79	19	79	20	119	0	55
US SEEDS	US C1129	153	--	--	--	--	100	--	--	--	--	79	20	112	1	56
MATURITY CHECK	PIONEER 3162	143	164	90	153	132	93	113	103	79	22	79	23	120	1	56
ASGROW	RX799Bt	161	166	--	163	--	105	114	--	80	22	79	24	120	1	54
MATURITY CHECK	MID-H-2530	147	137	83	142	122	96	94	95	80	16	80	17	114	0	55
US SEEDS	US C1139RR	143	--	--	--	--	93	--	--	--	--	80	20	96	1	54
GARST	8543Bt/IT	159	--	--	--	--	103	--	--	--	--	80	22	110	0	54
MILLER PREF.	MP-1155	167	--	--	--	--	109	--	--	--	--	80	22	122	2	54
CARGILL	7770	162	155	114	158	144	106	107	131	80	21	80	23	119	0	54
US SEEDS	US C1159	148	--	--	--	--	97	--	--	--	--	80	24	97	1	52
OTTILIE	E82116 EXP	160	--	--	--	--	104	--	--	--	--	80	25	115	0	51
ASGROW	RX738RR	142	--	--	--	--	93	--	--	--	--	81	19	105	1	54
OTTILIE	5399	150	--	--	--	--	98	--	--	--	--	81	20	117	0	53
NC+	5018	156	--	--	--	--	102	--	--	--	--	82	19	122	0	53
CARGILL	8412	160	--	--	--	--	104	--	--	--	--	83	24	123	2	54
AVERAGES		153	145	87	149	129	153	145	87	78	18	78	19	114	0	55
CV (%)		8	7	17	--	--	8	7	17	--	--	1	8	9	263	2
LSD (0.05)**		15	12	18	--	--	9	8	20	--	--	1	2	12	NS	1

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

WEST CENTRAL KANSAS STANDARD CORN TEST, NO-TILL DRYLAND

COUNTY: GREELEY

LOCATION: Southwest Research-Extension Center, Tribune

TEST SITE: Ulysses & Colby silt loam

1998 CROP: Wheat

1997 CROP: Fallow

FERTILIZER (lbs/acre): 80 N 0 P_2O_5 0 K_2O

PLANTING DATE: 5/14/99

HARVEST DATE: 10/12/99

COOPERATORS:

Alan Schlegel, agronomist; Michele Sells, research associate

TARGET POPULATION: 15,000 plants/acre, 13.9 in. spacing

FINAL STAND (% of target): 116

SILK DATES: 7/19/99 - 7/29/99

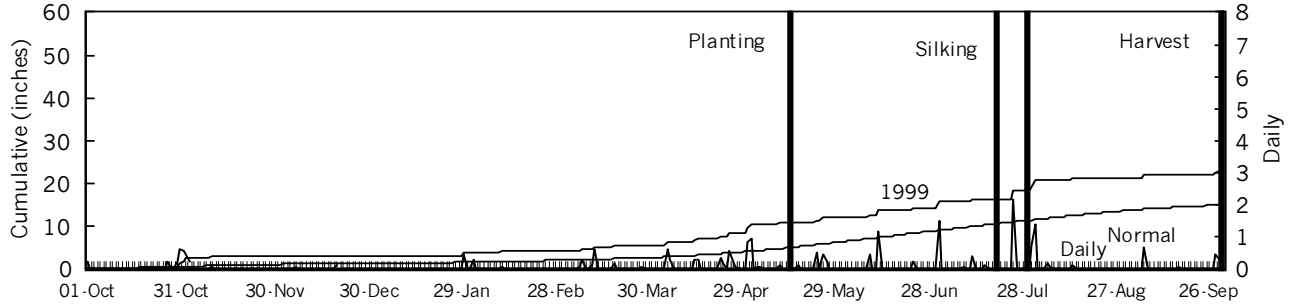
YIELD: **Avg. (bu/a):** 123 **Range (bu/a):** 101 - 141
LSD (bu/a): 15 **CV (%):** 10

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	60	15	1.6	9/24/99

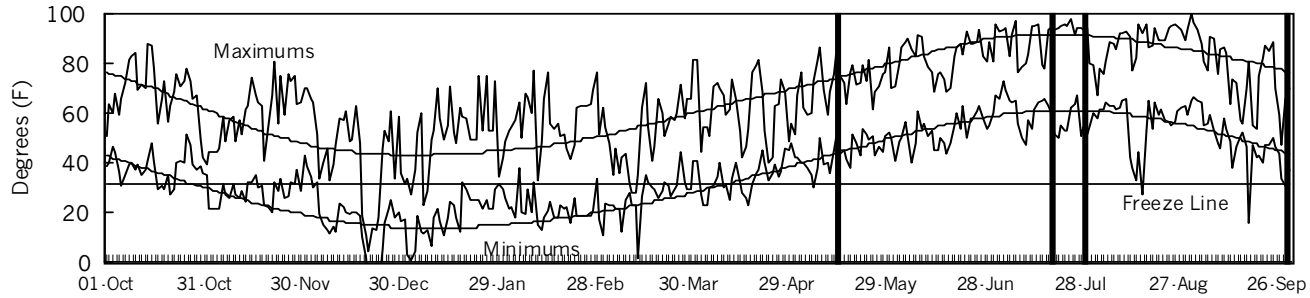
1999 GROWING CONDITONS:

Good soil moisture at planting facilitated excellent emergence. Above-average rain and favorable temperatures resulted in excellent dryland yields. Populations of European and southwestern corn borers were below treatment thresholds but may have contributed to lodging and reduced yields in some hybrids. No insecticide was applied.

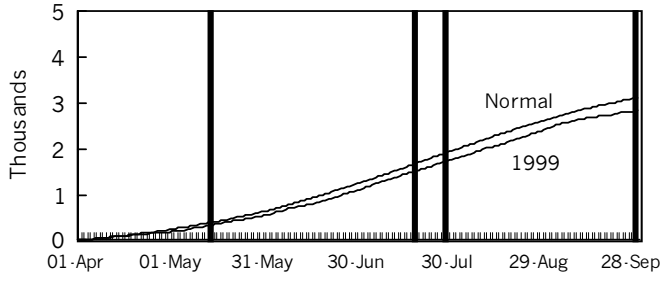
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	3.0	1.4	48	50	189	242
May	3.7	2.3	58	60	349	381
June	1.9	2.6	68	71	533	619
July	5.1	2.5	75	76	683	746
August	1.9	2.1	73	74	672	668
Sept.	1.6	1.3	62	65	412	490
Season Totals	17.2	12.3	64	66	2838	3144

TABLE 16. GREELEY CO. DRYLAND CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
PIONEER	36D14	104	--	--	--	--	85	--	--	--	--	66	15	114	4	57
ASGROW	RX638YG	127	--	--	--	--	103	--	--	--	--	68	17	113	0	54
PIONEER	35P12	106	--	--	--	--	86	--	--	--	--	69	16	110	0	55
MATURITY CHECK	SHORT - C4111	101	55	128	78	95	82	88	86	77	17	70	14	118	3	56
DEKALB	DK579	118	--	--	--	--	96	--	--	--	--	70	16	112	1	56
CARGILL	6888	131	--	--	--	--	106	--	--	--	--	70	18	115	4	55
GARST	8560IT	115	--	--	--	--	93	--	--	--	--	71	16	117	4	53
DEKALB	DK595Bty	141	--	--	--	--	114	--	--	--	--	71	18	124	0	55
PIONEER	34R07	128	--	--	--	--	104	--	--	--	--	72	17	110	0	56
TRIUMPH	4542	115	--	--	--	--	93	--	--	--	--	72	17	114	4	56
GARST	8543Bt/IT	141	--	--	--	--	114	--	--	--	--	72	18	124	0	54
MYCOGEN	2787	126	--	--	--	--	102	--	--	--	--	72	18	114	0	55
ASGROW	RX686RR/YG	134	--	--	--	--	109	--	--	--	--	72	19	124	0	54
ASGROW	RX740	120	--	--	--	--	97	--	--	--	--	73	17	116	5	56
ASGROW	RX738RR	130	--	--	--	--	105	--	--	--	--	73	17	117	4	55
MATURITY CHECK	MID-H-2530	123	67	140	95	110	99	107	93	80	17	73	18	113	5	54
MATURITY CHECK	PIONEER 3162	133	62	153	97	116	108	99	102	82	24	73	23	111	1	55
CARGILL	7770	123	85	169	104	125	100	136	113	83	22	74	22	121	3	54
ASGROW	RX799Bt	130	81	--	106	--	106	130	--	83	23	74	25	115	0	52
CARGILL	8412	122	77	--	99	--	99	123	--	85	24	76	26	116	2	51
AVERAGES		123	62	150	93	112	123	62	150	79	19	72	18	116	2	55
CV (%)		10	16	9	--	--	10	16	9	--	--	2	8	9	101	3
LSD (0.05)**		15	11	16	--	--	12	18	11	--	--	2	2	NS	2	2

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

TABLE 17. WESTERN KANSAS DRYLAND CORN TEST YIELD SUMMARY, 1997-1999.

			1999 YIELD AS % OF TEST AVERAGE [1]				1997-1999		
	BRAND	NAME	ELD	THD	GRD	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
	CARGILL	7770	93	106	100	99	10	6	7
	NC+	4616	--	104	--	--	7	6	5
	CARGILL	8412	105	104	99	103	5	5	4
c	MATURITY CHECK	PIONEER 3162	109	93	108	103	3	2	8
c	MATURITY CHECK	MID-H-2530	104	96	99	100	-3	2	8
	MATURITY CHECK	SHORT - C4111	83	86	82	84	-18 *	2	8
	ASGROW	RX638YG	102	93	103	100	--	--	--
	ASGROW	RX686RR/YG	103	108	109	106	--	--	--
	ASGROW	RX738RR	100	93	105	99	--	--	--
	ASGROW	RX740	107	99	97	101	--	--	--
	ASGROW	RX799Bt	120	105	106	110	--	--	--
	CARGILL	6888	--	109	106	--	--	--	--
	DEKALB	DK579	103	104	96	101	--	--	--
	DEKALB	DK595Bty	107	97	114	106	--	--	--
	GARST	8539BLT	113	--	--	--	--	--	--
	GARST	8543Bt/IT	118	103	114	112	--	--	--
	GARST	8560IT	96	--	93	--	--	--	--
	KAYSTAR	KX - 790	--	92	--	--	--	--	--
	MIDLAND	786	86	--	--	--	--	--	--
	MIDLAND	798	111	--	--	--	--	--	--
	MIDLAND	7A08	100	--	--	--	--	--	--
	MILLER PREF.	MP-1123	--	102	--	--	--	--	--
	MILLER PREF.	MP-1155	--	109	--	--	--	--	--
	MYCOGEN	2787	108	103	102	105	--	--	--
	NC+	4880	--	101	--	--	--	--	--
	NC+	5018	--	102	--	--	--	--	--
	NK	N59-Q9	--	89	--	--	--	--	--
	NK	N67-H6	--	110	--	--	--	--	--
	OTTILIE	2467	--	116	--	--	--	--	--
	OTTILIE	5399	--	98	--	--	--	--	--
	OTTILIE	5480	--	102	--	--	--	--	--
	OTTILIE	E82116 EXP	--	104	--	--	--	--	--
	OTTLIE	5177RRBt	--	107	--	--	--	--	--
	PIONEER	34R07	117	104	104	108	--	--	--
	PIONEER	35P12	91	97	86	92	--	--	--
	PIONEER	36D14	--	89	85	--	--	--	--
	TRIUMPH	1141	--	102	--	--	--	--	--
	TRIUMPH	2010	98	--	--	--	--	--	--
	TRIUMPH	4542	--	--	93	--	--	--	--
	US SEEDS	US C1069Bt	99	92	--	--	--	--	--
	US SEEDS	US C1079RR	84	102	--	--	--	--	--
	US SEEDS	US C1099	84	94	--	--	--	--	--
	US SEEDS	US C1119RR	80	109	--	--	--	--	--
	US SEEDS	US C1129	93	100	--	--	--	--	--
	US SEEDS	US C1129Bt	93	92	--	--	--	--	--
	US SEEDS	US C1139RR	101	93	--	--	--	--	--
	US SEEDS	US C1159	91	97	--	--	--	--	--
	US SEEDS	US E1120	--	94	--	--	--	--	--
	AVERAGES		110	153	123	129	--	--	--
	CV (%)		9	8	10	--	--	--	--
	LSD (0.05)**		11	9	12	--	--	--	--

1 ELD =Ellis Co., Hays THD =Thomas Co., Colby GRD = Greeley Co., Tribune

2 DYA = Differential Yielding Ability; average difference of hybrid yield compared to average of check hybrids in bushels per acre.

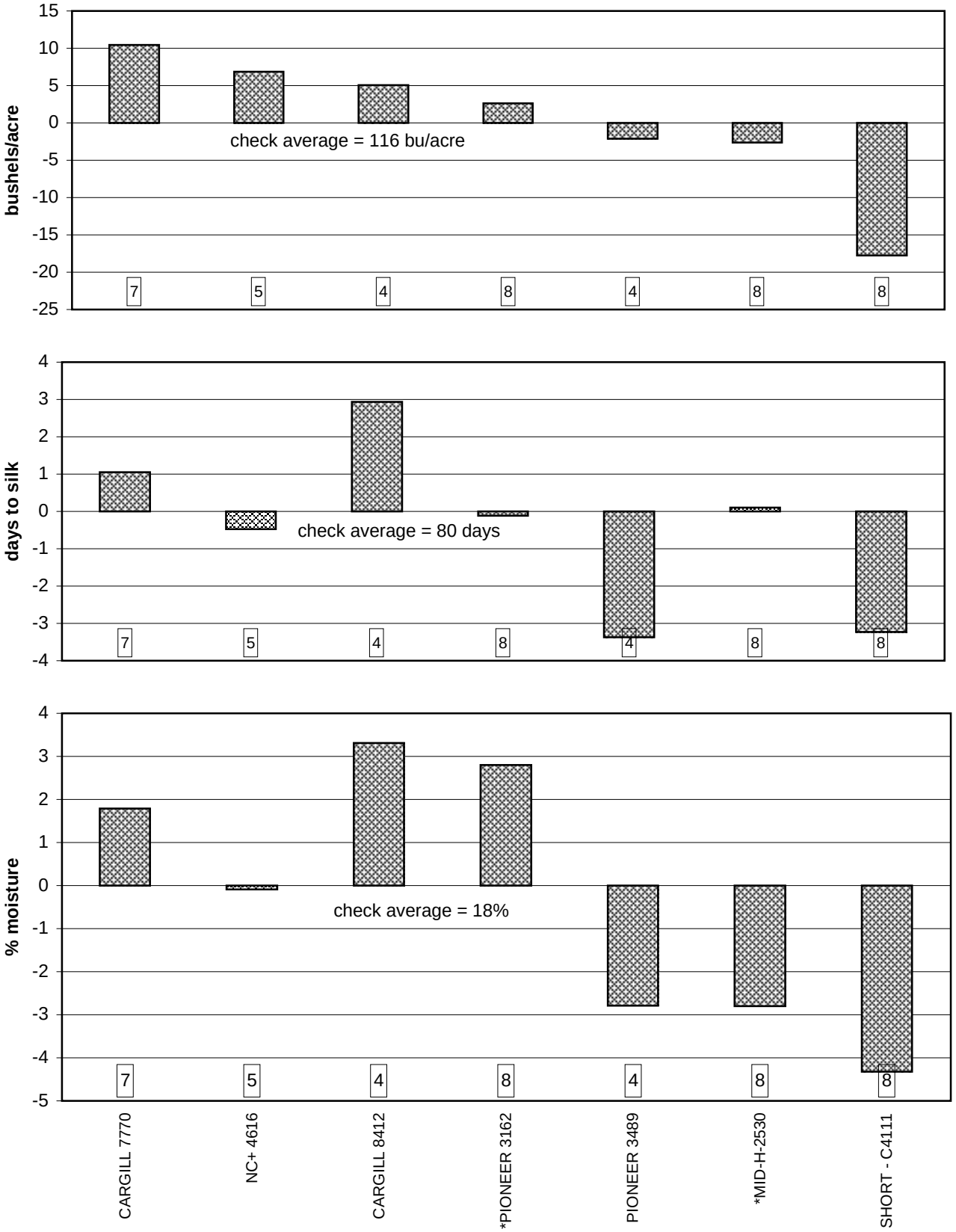
3 SE = Standard Error of DYA; measure of consistency of yield differences.

4 N = Number of tests where hybrid was compared with checks; DYA was calculated only for those with at least 4 comparisons.

c Check hybrid; yield of each hybrid was compared to average yield of these check hybrids.

***** Statistically significantly different from the average of the check hybrids, which = 0 ($P < 0.5$).

Figure 8. Northwestern Kansas dryland corn hybrid performance summary, 1997-1999.



Bars show differences between hybrid and average of checks*.
Values in boxes are numbers of tests that compared hybrids and checks.

SOUTH CENTRAL KANSAS STANDARD CORN TEST ON SANDY LOAM, IRRIGATED

COUNTY: STAFFORD

LOCATION: Sandyland Experiment Field, St. John

TEST SITE: Naron loamy fine sand

1998 CROP: Wheat

1997 CROP: Corn

FERTILIZER (lbs/acre): 268 N 46 P_2O_5 0 K_2O

PLANTING DATE: 4/20/99

HARVEST DATE: 9/30/99

COOPERATORS:

Victor Martin, agronomist; Ron Cunningham and Jeff Scott, technicians

TARGET POPULATION: 30,000 plants/acre, 7.0 in. spacing

FINAL STAND (% of target): 91

SILK DATES: 7/1/99 - 7/10/99

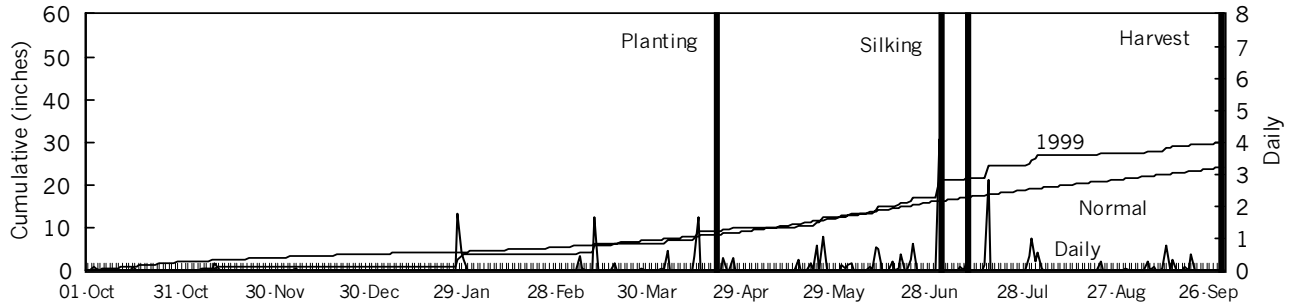
YIELD: **Avg. (bu/a):** 190 **Range (bu/a):** 150 - 233
LSD (bu/a): 23 **CV (%):** 10

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	0	50	2.3	9/3/99

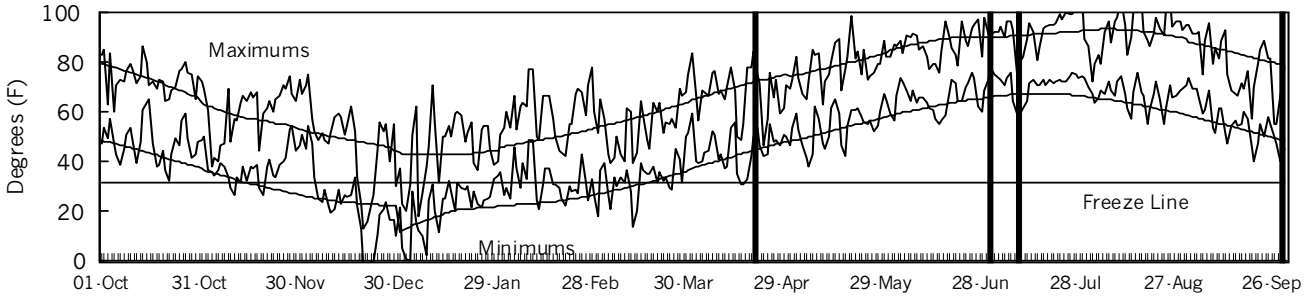
1999 GROWING CONDITONS:

Conditions were cool and wet at planting. Stands were reduced somewhat at V4 - V5, when several plants snapped off at the base. The cause of the breaking was undetermined but may have been strong wind. Herbicide history did not appear to be a factor. Southwestern corn borers were present but appeared to cause little lodging or ear drop at harvest. An insecticide application reduced the potential for corn borer damage. Weed control was excellent. Hot, dry conditions predominated from August until harvest in late September.

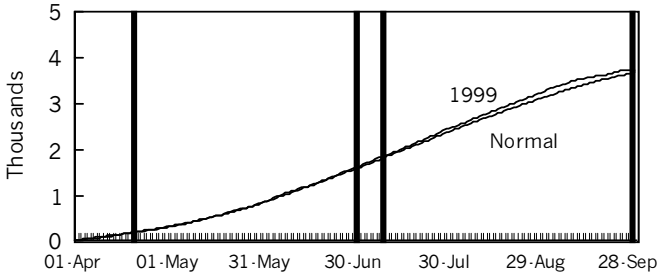
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	3.7	2.1	57	57	288	320
May	2.7	3.3	67	66	528	493
June	4.3	3.8	77	76	747	756
July	9.0	2.9	83	79	883	851
August	1.4	2.4	80	78	806	734
Sept.	2.4	2.5	67	69	507	559
Season Totals	23.4	16.9	72	71	3759	3714

TABLE 18. STAFFORD CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	177	166	164	171	169	93	84	74	70	13	72	14	98	0	59
ASGROW	RX730YG	184	--	--	--	--	97	--	--	--	--	74	16	87	0	58
MYCOGEN	2799	184	--	--	--	--	96	--	--	--	--	74	16	89	0	57
NET	1105	172	--	--	--	--	90	--	--	--	--	74	16	86	0	56
MATURITY CHECK	MID-H-2530	171	183	210	177	188	90	93	96	73	13	75	14	76	0	57
HOEGEMEYER	2668	150	--	--	--	--	79	--	--	--	--	75	16	75	0	58
NK	N7590BT	194	228	--	211	--	102	116	--	73	14	75	16	85	0	58
PIONEER	33A14	218	215	--	217	--	115	109	--	72	14	75	16	99	0	59
ASGROW	RX740	178	--	--	--	--	93	--	--	--	--	76	15	89	0	60
KAYSTAR	8900RR	187	--	--	--	--	98	--	--	--	--	76	15	85	0	58
CARGILL	7770	188	--	203	--	--	99	--	92	--	--	76	16	91	0	59
DEKALB	DK655	207	--	--	--	--	108	--	--	--	--	76	16	93	0	60
DELANGE	DS 1997	210	207	228	208	215	110	105	103	75	14	76	16	85	0	57
NC+	5588B	172	--	--	--	--	90	--	--	--	--	76	16	78	0	56
PIONEER	33H67	184	--	--	--	--	97	--	--	--	--	76	16	95	0	61
MATURITY CHECK	PIONEER 3162	201	177	200	189	193	105	90	91	74	15	76	17	87	0	61
NC+	6868	191	219	--	205	--	100	111	--	73	14	76	17	86	0	56
NET	1177	194	--	--	--	--	102	--	--	--	--	76	17	100	0	57
NK	N7639BT	162	220	--	191	--	85	112	--	74	15	76	17	94	0	60
WILSON	1861Bt	208	--	--	--	--	109	--	--	--	--	76	17	106	0	60
MIDLAND	7A08	160	--	--	--	--	84	--	--	--	--	76	18	85	0	57
GARST	8366Bt/LL	207	--	--	--	--	109	--	--	--	--	77	15	91	0	57
DEKALB	DK647Bty	181	--	--	--	--	95	--	--	--	--	77	16	94	0	57
NC+	5445	174	205	219	189	199	91	104	99	75	14	77	16	77	0	57
ASGROW	RX889	196	214	--	205	--	103	108	--	75	15	77	17	89	0	57
GARST	8325Bt	174	--	--	--	--	92	--	--	--	--	77	17	93	0	57
NK	N79-L3	199	216	--	207	--	104	109	--	75	15	77	17	98	0	62
PIONEER	31A12	195	201	--	198	--	102	102	--	75	15	77	17	100	0	59
PIONEER	31B13	225	233	--	229	--	118	118	--	76	15	77	17	94	0	60
CARGILL	8412	193	205	--	199	--	101	104	--	76	14	78	16	93	0	59
MIDLAND	786	197	210	244	204	217	103	107	111	76	14	78	16	89	0	57
PIONEER	3237	198	223	242	210	221	104	113	110	76	14	78	16	92	0	59
TRIUMPH	1514Bt	219	--	--	--	--	115	--	--	--	--	78	16	98	0	56
ASGROW	RX813	188	203	--	195	--	99	103	--	75	15	78	17	99	0	57
DEKALB	DK679Bty	233	--	--	--	--	122	--	--	--	--	78	17	94	0	59
MYCOGEN	2888IMI	196	--	--	--	--	103	--	--	--	--	78	17	94	0	59
NC+	6619B	192	--	--	--	--	101	--	--	--	--	78	17	95	0	58
NET	1167	178	--	--	--	--	94	--	--	--	--	78	17	98	0	57
TRIUMPH	1866Bt	204	--	--	--	--	107	--	--	--	--	78	17	88	0	59
ASGROW	RX799Bt	191	180	--	186	--	100	91	--	75	16	78	18	93	0	59
MIDLAND	798	215	195	--	205	--	113	99	--	76	15	78	18	90	0	58
HOEGEMEYER	2730	177	--	--	--	--	93	--	--	--	--	79	15	83	0	57
ASGROW	RX897IMI	177	--	--	--	--	93	--	--	--	--	79	16	84	0	58
HOEGEMEYER	2761	193	194	--	194	--	101	98	--	76	15	79	17	95	0	57
WILSON	2330	156	210	232	183	199	82	106	106	77	16	79	19	96	0	56
WILSON	E1046	191	--	--	--	--	100	--	--	--	--	80	15	95	0	56
GARST	8315	216	--	--	--	--	113	--	--	--	--	81	15	94	0	58
AVERAGES		190	197	220	194	203	190	197	220	75	14	77	16	91	0	58
CV (%)		10	10	9	--	--	10	10	9	--	--	2	4	10	0	1
LSD (0.05)**		23	22	22	--	--	12	11	10	--	--	2	1	10	0	1

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

NORTHWESTERN KANSAS STANDARD CORN TEST, IRRIGATED

COUNTY: THOMAS

LOCATION: Northwest Research-Extension Center, Colby

TEST SITE: Keith silt loam

1998 CROP: Sunflower

1997 CROP: Sorghum

FERTILIZER (lbs/acre): 235 N 45 P_2O_5 0 K_2O

PLANTING DATE: 5/7/99

HARVEST DATE: 10/20/99

COOPERATORS:

Patrick Evans, agronomist

TARGET POPULATION: 30,000 plants/acre, 7.0 in. spacing

FINAL STAND (% of target): 102

SILK DATES: 6/29/99 - 7/24/99

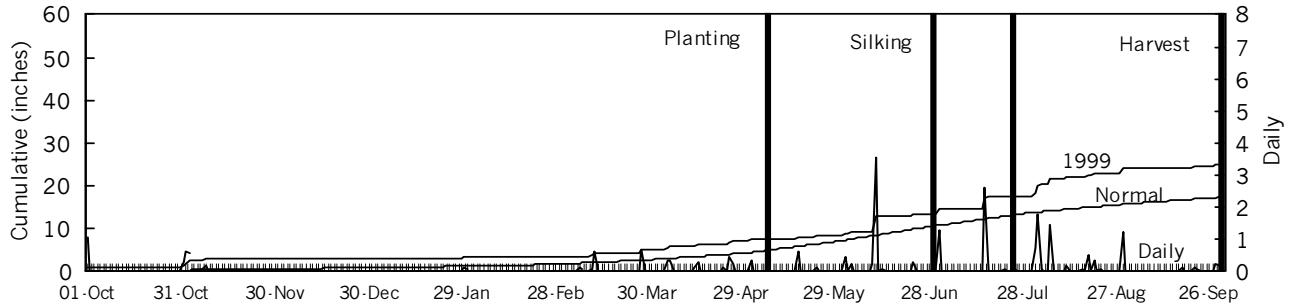
YIELD: **Avg. (bu/a):** 234 **Range (bu/a):** 178 - 269
LSD (bu/a): 17 **CV (%):** 6

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	60	0	1.5	9/24/99

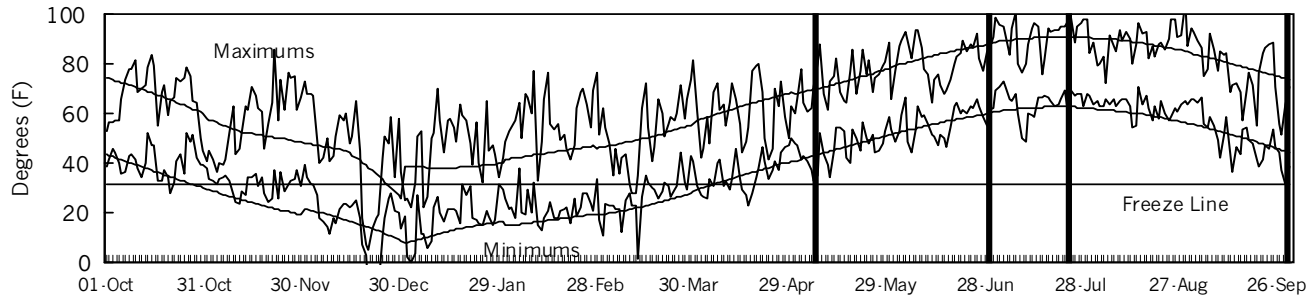
1999 GROWING CONDITONS:

Good stands and favorable growing conditions for most of the season contributed to excellent yields. Yields might have been even better if not for a June 11 hailstorm that shredded leaves in all plots. Spider mites and corn borers were noted but caused minimal damage after an insecticide application.

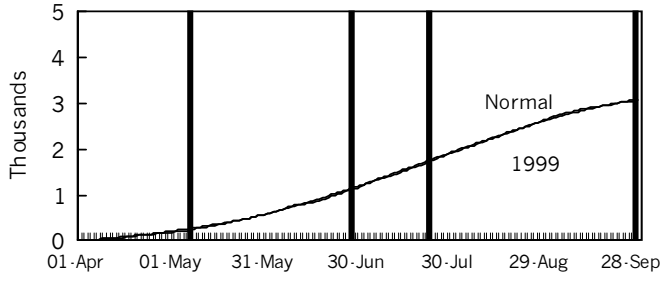
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	2.0	1.5	48	50	171	209
May	1.3	2.9	60	60	386	353
June	5.0	3.6	70	71	574	631
July	4.2	3.1	78	77	774	775
August	6.6	2.0	76	74	739	683
Sept.	0.8	1.6	63	65	429	466
Season Totals	20.0	14.6	66	66	3072	3116

TABLE 19. THOMAS CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	202	222	209	212	211	86	88	89	74	15	73	14	104	1	57
DEKALB	DK551Bty	241	--	--	--	--	103	--	--	--	--	74	15	103	0	57
ASGROW	RX638YG	179	--	--	--	--	76	--	--	--	--	74	17	102	0	55
HIGH CYCLE	HC7734RR	234	--	--	--	--	100	--	--	--	--	74	19	101	1	53
CARGILL	6888	234	248	254	241	245	100	98	107	76	19	74	20	103	0	55
NK	N67-H6	230	--	--	--	--	98	--	--	--	--	74	20	102	1	55
MYCOGEN	2717	221	--	--	--	--	94	--	--	--	--	75	16	101	0	57
NK	N65-A1	233	--	--	--	--	100	--	--	--	--	75	18	100	0	55
HYTEST	BH4612	230	--	--	--	--	98	--	--	--	--	75	19	104	0	55
ASGROW	RX686RR/YG	242	--	--	--	--	103	--	--	--	--	75	20	103	2	53
MYCOGEN	2799	231	--	--	--	--	99	--	--	--	--	75	20	104	1	54
OTTLIE	5177RRBt	226	--	--	--	--	97	--	--	--	--	75	20	102	0	53
LG SEEDS	LG2579	224	248	251	236	241	95	98	106	76	20	75	21	103	0	54
NC+	4880	233	245	249	239	242	99	97	106	76	20	75	21	105	0	54
NK	NX6608	223	--	--	--	--	95	--	--	--	--	75	21	105	1	55
OTTILIE	2467	235	234	239	235	236	100	93	101	75	20	75	21	101	0	54
PIONEER	33B50	224	--	--	--	--	96	--	--	--	--	75	21	99	0	55
MYCOGEN	2652	222	--	--	--	--	95	--	--	--	--	76	15	104	0	55
DEKALB	DK589Bty	227	--	--	--	--	97	--	--	--	--	76	16	101	0	55
MATURITY CHECK	MID-H-2530	215	211	235	213	221	92	84	100	78	17	76	17	104	2	53
NK	N59-Q9	225	--	--	--	--	96	--	--	--	--	76	17	102	0	55
HAWKEYE	SX44A	235	267	236	251	246	101	106	100	77	19	76	20	104	0	55
LG SEEDS	LG2584BT	226	--	--	--	--	97	--	--	--	--	76	20	101	1	55
HIGH CYCLE	HC-7766Bt	225	--	--	--	--	96	--	--	--	--	76	21	93	0	54
NET	1105	242	--	--	--	--	103	--	--	--	--	76	21	103	0	54
NC+	5588B	238	--	--	--	--	102	--	--	--	--	76	23	101	0	52
PFISTER	3977	249	277	--	263	--	107	110	--	78	25	76	27	104	0	51
KAYSTAR	8900RR	240	--	--	--	--	102	--	--	--	--	77	19	104	0	42
NK	N7070BT	256	258	--	257	--	109	102	--	78	20	77	22	101	0	54
PIONEER	33P66	242	--	--	--	--	103	--	--	--	--	77	22	101	0	56
CARGILL	7770	248	244	259	246	250	106	97	109	79	21	77	23	104	0	54
MILLER PREF.	MP-1155	269	284	--	277	--	115	113	--	78	22	77	23	100	0	55
OTTILIE	5480	241	280	--	260	--	103	111	--	78	22	77	23	102	0	53
ASGROW	RX799Bt	249	241	--	245	--	106	95	--	79	22	77	24	103	0	54
MILLER PREF.	MP-1154	232	--	--	--	--	99	--	--	--	--	77	24	102	0	54
NC+	5999	254	--	--	--	--	108	--	--	--	--	77	24	105	1	50
MATURITY CHECK	PIONEER 3162	216	238	243	227	232	92	94	103	79	23	77	25	105	1	54
PFISTER	3321	258	--	--	--	--	110	--	--	--	--	77	26	105	0	52
NET	1177	226	--	--	--	--	96	--	--	--	--	77	27	98	0	52
ASGROW	RX740	222	--	--	--	--	95	--	--	--	--	78	19	81	3	57
ASGROW	RX738RR	218	--	--	--	--	93	--	--	--	--	78	21	102	1	55
LG SEEDS	LG2599BT	219	--	--	--	--	94	--	--	--	--	78	21	102	0	55

(continued)

TABLE 19. THOMAS CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
HAWKEYE	SX60	232	--	--	--	--	99	--	--	--	--	78	22	104	0	53
HYTEST	HT7705	231	--	--	--	--	98	--	--	--	--	78	22	104	0	53
OTTILIE	5399	230	--	--	--	--	98	--	--	--	--	78	22	102	1	54
DEKALB	DK647Bty	242	--	--	--	--	103	--	--	--	--	78	23	105	2	53
HAWKEYE	SX76	241	266	--	254	--	103	106	--	78	23	78	24	102	0	54
HIGH CYCLE	HC-7879Bt	226	--	--	--	--	97	--	--	--	--	78	24	106	0	54
MIDLAND	7A08	232	--	--	--	--	99	--	--	--	--	78	24	103	0	53
NC+	5445	221	240	--	230	--	94	95	--	80	22	78	24	99	0	54
PIONEER	32J55	249	308	272	278	276	106	122	115	80	24	78	25	104	1	55
NET	1167	242	--	--	--	--	104	--	--	--	--	78	26	102	0	51
PIONEER	31A12	244	288	--	266	--	104	114	--	80	24	78	26	106	0	54
PFISTER	3049	234	262	--	248	--	100	104	--	80	22	79	24	102	0	52
OTTILIE	E82116 EXP	269	--	--	--	--	115	--	--	--	--	79	25	101	0	53
ASGROW	RX889	229	259	--	244	--	98	103	--	81	26	79	29	105	0	52
CARGILL	8412	246	295	--	271	--	105	117	--	81	23	80	25	101	0	53
MIDLAND	786	250	305	--	277	--	107	121	--	81	24	80	26	104	0	50
TRIUMPH	1866Bt	243	--	--	--	--	104	--	--	--	--	80	26	101	0	53
ASGROW	RX813	231	232	--	231	--	99	92	--	81	24	80	27	104	0	52
MIDLAND	798	254	303	--	278	--	108	120	--	82	24	81	27	102	0	53
AVERAGES		234	252	236	243	241	234	252	236	78	21	77	22	102	0	54
CV (%)		6	6	7	--	--	6	6	7	--	--	1	5	7	290	6
LSD (0.05)**		17	18	19	--	--	7	7	8	--	--	1	1	NS	NS	4

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

SOUTHWESTERN KANSAS STANDARD CORN TEST, IRRIGATED

COUNTY: FINNEY

LOCATION: Southwest Research-Extension Center, Garden City

TEST SITE: Keith silt loam

1998 CROP: Soybean

1997 CROP: Corn

FERTILIZER (lbs/acre): 100 N 0 P_2O_5 0 K_2O

PLANTING DATE: 5/10/99

HARVEST DATE: 10/2/99

COOPERATORS:

Merle Witt, agronomist

TARGET POPULATION: 30,000 plants/acre, 7.0 in. spacing

FINAL STAND (% of target): 97

SILK DATES: 7/13/99 - 7/21/99

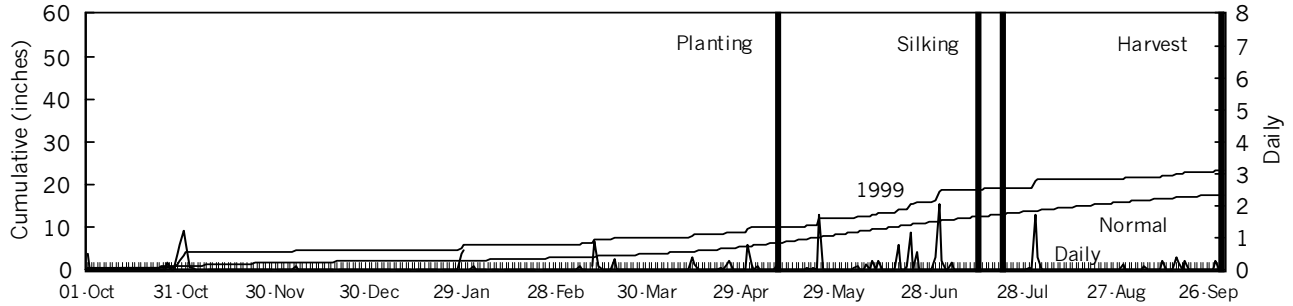
YIELD: **Avg. (bu/a):** 184 **Range (bu/a):** 118 - 225
LSD (bu/a): 19 **CV (%):** 9

CORN BORERS:	Infestation (% plants) ECB	SWCB	Tunnels (in./plant)	Sample date
(susc. hybrid)	60	15	13.7	9/28/99

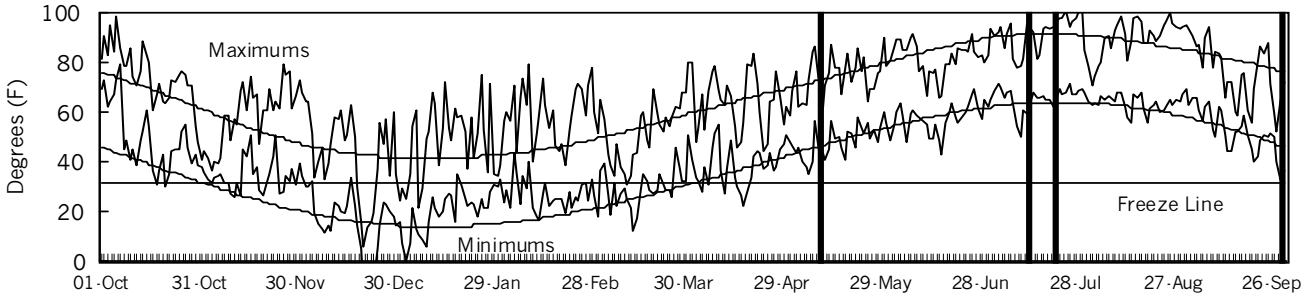
1999 GROWING CONDITONS:

Early-season conditions were favorable for stand establishment and early growth. A July 1 hailstorm caused approximately 65% defoliation at the 14-leaf stage. Thanks to above-average rainfall and mild temperatures, the test recovered to a large extent and produced excellent yields. European and southwestern corn borers caused some damage. An insecticide application on August 1 may have reduced potential damage. Some fusarium stalk rot also was detected.

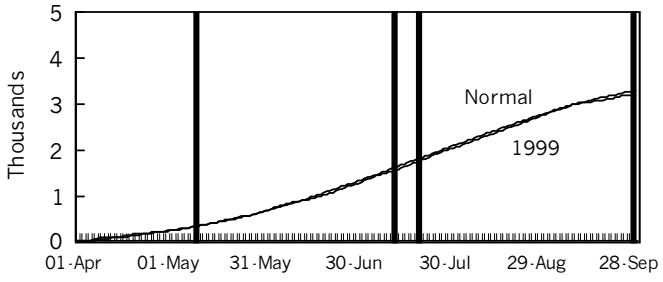
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	1.3	1.8	51	51	226	234
May	3.2	2.8	62	62	411	393
June	4.2	3.0	70	72	588	673
July	2.7	2.5	79	78	786	795
August	2.4	2.1	77	75	750	715
Sept.	1.7	1.6	64	67	446	514
Season Totals	15.5	13.8	67	68	3207	3323

TABLE 20. FINNEY CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	118	146	176	132	147	64	81	80	72	14	64	15	107	7	0
NC+	4880	163	185	--	174	--	89	103	--	72	18	64	18	99	1	0
GARST	8464	172	--	--	--	--	94	--	--	--	--	64	19	87	2	0
ASGROW	RX638YG	132	--	--	--	--	72	--	--	--	--	65	17	95	2	0
MYCOGEN	2799	167	--	--	--	--	91	--	--	--	--	65	19	97	1	0
HOEGEMEYER	2668	163	--	--	--	--	89	--	--	--	--	66	18	82	1	0
US SEEDS	US C1129Bt	133	--	--	--	--	73	--	--	--	--	66	18	100	2	0
ASGROW	RX686RR/YG	171	--	--	--	--	93	--	--	--	--	66	19	100	2	0
HOEGEMEYER	2650	161	--	--	--	--	88	--	--	--	--	66	19	102	1	0
MIDLAND	7A08	203	--	--	--	--	111	--	--	--	--	66	19	98	2	0
TRIUMPH	1141Bt	187	--	--	--	--	102	--	--	--	--	66	19	103	0	0
GARST	8342GLS/IT	185	--	--	--	--	101	--	--	--	--	66	20	99	0	0
NC+	6868	182	--	--	--	--	99	--	--	--	--	66	20	94	2	0
PFISTER	3977	200	176	--	188	--	109	98	--	74	19	66	21	102	1	0
CARGILL	7770	182	198	219	190	199	99	110	99	75	17	67	18	101	2	0
DEKALB	DK647Bty	177	--	--	--	--	96	--	--	--	--	67	18	103	1	0
KAYSTAR	8900RR	157	--	--	--	--	85	--	--	--	--	67	18	90	0	0
MATURITY CHECK	MID-H-2530	177	180	206	179	188	96	100	93	75	17	67	18	92	1	0
PIONEER	33H67	200	205	--	203	--	109	114	--	76	17	67	18	101	1	0
NK	N79-L3	177	185	--	181	--	96	103	--	75	18	67	19	94	1	0
NK	N7333BT	192	218	--	205	--	105	121	--	74	18	67	19	103	1	0
PFISTER	2652	188	--	--	--	--	102	--	--	--	--	67	19	104	1	0
MILLER PREF.	MP-1154	214	--	--	--	--	116	--	--	--	--	67	20	101	2	0
ASGROW	RX799Bt	197	--	--	--	--	107	--	--	--	--	67	21	97	0	0
US SEEDS	US C1159	187	--	--	--	--	102	--	--	--	--	67	21	94	1	0
ASGROW	RX738RR	163	--	--	--	--	88	--	--	--	--	68	17	101	5	0
HOEGEMEYER	2718	165	--	--	--	--	90	--	--	--	--	68	17	102	4	0
ASGROW	RX740	178	--	--	--	--	97	--	--	--	--	68	18	97	2	0
NC+	5529	187	--	--	--	--	102	--	--	--	--	68	18	87	2	0
WILSON	1861Bt	193	--	--	--	--	105	--	--	--	--	68	18	102	1	0
ASGROW	RX813	195	--	--	--	--	106	--	--	--	--	68	19	96	2	0
NK	N7590BT	192	223	--	208	--	105	124	--	75	17	68	19	104	0	0
PIONEER	33P66	196	--	--	--	--	107	--	--	--	--	68	19	97	0	0
US SEEDS	US C1139RR	173	--	--	--	--	94	--	--	--	--	68	19	97	3	0
DEKALB	DK655	169	--	--	--	--	92	--	--	--	--	68	20	102	2	0
GARST	8325Bt	187	--	--	--	--	102	--	--	--	--	68	20	100	0	0
NK	N7639BT	182	208	--	195	--	99	115	--	75	19	68	20	101	0	0
TERRA	TR 1166Bt	193	--	--	--	--	105	--	--	--	--	68	20	95	0	0
MATURITY CHECK	PIONEER 3162	204	163	228	183	198	111	90	103	75	20	68	21	93	1	0
PIONEER	32P75	219	--	--	--	--	119	--	--	--	--	68	21	102	0	0
PIONEER	31A12	210	206	--	208	--	114	115	--	76	20	68	22	91	0	0
NK	4662	185	207	--	196	--	100	115	--	77	18	69	19	104	3	0

(continued)

TABLE 20. FINNEY CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MIDLAND	786	171	204	239	188	205	93	113	108	78	18	70	19	94	6	0
MYCOGEN	2888IMI	200	--	--	--	--	109	--	--	--	--	70	19	103	0	0
TERRA	TR 1157	164	--	214	--	--	89	--	97	--	--	70	19	91	4	0
ASGROW	RX889	225	--	--	--	--	122	--	--	--	--	70	20	99	4	0
CARGILL	8412	185	183	--	184	--	101	102	--	78	19	70	20	91	3	0
GARST	8285	191	177	227	184	198	104	98	103	79	19	70	20	95	2	0
HYTEST	BH4748	186	--	--	--	--	101	--	--	--	--	70	20	95	4	0
LG SEEDS	LG2694	181	186	--	183	--	98	103	--	77	19	70	20	88	3	0
MIDLAND	798	201	201	--	201	--	109	112	--	78	19	70	20	101	5	0
TERRA	TR 1167	184	--	--	--	--	100	--	--	--	--	70	20	91	0	0
TERRA	TR 1208	176	--	--	--	--	96	--	--	--	--	70	20	95	0	0
WILSON	E4019Bt	191	--	--	--	--	104	--	--	--	--	70	20	102	0	0
HYTEST	HT7722	197	--	--	--	--	107	--	--	--	--	70	21	95	0	0
TRIUMPH	1866Bt	202	--	--	--	--	110	--	--	--	--	70	21	87	1	0
LG SEEDS	LG2726	188	194	228	191	203	102	108	103	78	20	70	22	98	2	0
TERRA	TR 702	200	--	253	--	--	109	--	114	--	--	71	22	100	2	0
HYTEST	HT7820	202	--	--	--	--	110	--	--	--	--	72	19	95	5	0
WILSON	E1046	201	--	--	--	--	110	--	--	--	--	72	20	99	3	0
WILSON	2330	193	206	262	200	221	105	114	119	80	20	72	22	100	2	0
AVERAGES		184	180	221	182	195	184	180	221	76	18	68	19	97	2	0
CV (%)		9	10	5	--	--	9	10	5	--	--	1	7	6	150	0
LSD (0.05)**		19	23	15	--	--	10	13	7	--	--	1	2	6	3	0

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

TABLE 21. WESTERN KANSAS IRRIGATED CORN TEST YIELD SUMMARY, 1997-1999.

			1999 YIELD AS % OF TEST AVERAGE [1]					1997-1999		
	BRAND	NAME	STI	THI	GRI	FNI	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
	MILLER PREF.	MP-1155	--	115	--	--	--	42 *	6	5
	PIONEER	32J55	--	106	--	--	--	40 *	6	9
	PIONEER	33A14	115	--	--	--	--	36 *	1	5
	MIDLAND	798	113	108	--	109	110	29 *	10	7
	PIONEER	31A12	102	104	--	114	107	29 *	8	6
	MIDLAND	786	103	107	--	93	101	23	13	7
	CARGILL	8412	101	105	--	101	102	21	9	7
	PFISTER	3977	--	107	--	109	--	21	9	5
	WILSON	2330	82	--	--	105	--	18	11	6
	NK	N7639BT	85	--	--	99	--	17	14	5
	CARGILL	7770	99	106	--	99	101	13 *	5	10
	ASGROW	RX813	99	99	--	106	101	10	4	5
	NC+	4880	--	99	--	89	--	8	7	6
	NC+	5445	91	94	--	--	--	8	5	7
	OTTILIE	2467	--	100	--	--	--	8 *	3	6
	CARGILL	6888	--	100	--	--	--	7	4	9
c	MATURITY CHECK	PIONEER 3162	105	92	--	111	103	5	2	11
c	MATURITY CHECK	MID-H-2530	90	92	--	96	93	-5	2	11
	MATURITY CHECK	SHORT - C4111	93	86	--	64	81	-28 *	6	11
	ASGROW	RX638YG	--	76	--	72	--	--	--	--
	ASGROW	RX686RR/YG	--	103	--	93	--	--	--	--
	ASGROW	RX730YG	97	--	--	--	--	--	--	--
	ASGROW	RX738RR	--	93	--	88	--	--	--	--
	ASGROW	RX740	93	95	--	97	95	--	--	--
	ASGROW	RX799Bt	100	106	--	107	105	--	--	--
	ASGROW	RX889	103	98	--	122	108	--	--	--
	ASGROW	RX897IMI	93	--	--	--	--	--	--	--
	DEKALB	DK551Bty	--	103	--	--	--	--	--	--
	DEKALB	DK589Bty	--	97	--	--	--	--	--	--
	DEKALB	DK647Bty	95	103	--	96	98	--	--	--
	DEKALB	DK655	108	--	--	92	--	--	--	--
	DEKALB	DK679Bty	122	--	--	--	--	--	--	--
	DELANGE	DS 1997	110	--	--	--	--	--	--	--
	GARST	8285	--	--	--	104	--	--	--	--
	GARST	8315	113	--	--	--	--	--	--	--
	GARST	8325Bt	92	--	--	102	--	--	--	--
	GARST	8342GLS/IT	--	--	--	101	--	--	--	--
	GARST	8366Bt/LL	109	--	--	--	--	--	--	--
	GARST	8464	--	--	--	94	--	--	--	--
	HAWKEYE	SX44A	--	101	--	--	--	--	--	--
	HAWKEYE	SX60	--	99	--	--	--	--	--	--
	HAWKEYE	SX76	--	103	--	--	--	--	--	--
	HIGH CYCLE	HC7734RR	--	100	--	--	--	--	--	--

(continued)

TABLE 21. WESTERN KANSAS IRRIGATED CORN TEST YIELD SUMMARY, 1997-1999.

		1999 YIELD AS % OF TEST AVERAGE [1]					1997-1999		
BRAND	NAME	STI	THI	GRI	FNI	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
HIGH CYCLE	HC-7766Bt	--	96	--	--	--	--	--	--
HIGH CYCLE	HC-7879Bt	--	97	--	--	--	--	--	--
HOEGEMEYER	2650	--	--	--	88	--	--	--	--
HOEGEMEYER	2668	79	--	--	89	--	--	--	--
HOEGEMEYER	2718	--	--	--	90	--	--	--	--
HOEGEMEYER	2730	93	--	--	--	--	--	--	--
HOEGEMEYER	2761	101	--	--	--	--	--	--	--
HYTEST	BH4612	--	98	--	--	--	--	--	--
HYTEST	BH4748	--	--	--	101	--	--	--	--
HYTEST	HT7705	--	98	--	--	--	--	--	--
HYTEST	HT7722	--	--	--	107	--	--	--	--
HYTEST	HT7820	--	--	--	110	--	--	--	--
KAYSTAR	8900RR	98	102	--	85	95	--	--	--
LG SEEDS	LG2579	--	95	--	--	--	--	--	--
LG SEEDS	LG2584BT	--	97	--	--	--	--	--	--
LG SEEDS	LG2599BT	--	94	--	--	--	--	--	--
LG SEEDS	LG2694	--	--	--	98	--	--	--	--
LG SEEDS	LG2726	--	--	--	102	--	--	--	--
MIDLAND	7A08	84	99	--	111	98	--	--	--
MILLER PREF.	MP-1154	--	99	--	116	--	--	--	--
MYCOGEN	2652	--	95	--	--	--	--	--	--
MYCOGEN	2717	--	94	--	--	--	--	--	--
MYCOGEN	2799	96	99	--	91	95	--	--	--
MYCOGEN	2888IMI	103	--	--	109	--	--	--	--
NC+	5529	--	--	--	102	--	--	--	--
NC+	5588B	90	102	--	--	--	--	--	--
NC+	5999	--	108	--	--	--	--	--	--
NC+	6619B	101	--	--	--	--	--	--	--
NC+	6868	100	--	--	99	--	--	--	--
NET	1105	90	103	--	--	--	--	--	--
NET	1167	94	104	--	--	--	--	--	--
NET	1177	102	96	--	--	--	--	--	--
NK	4662	--	--	--	100	--	--	--	--
NK	N59-Q9	--	96	--	--	--	--	--	--
NK	N65-A1	--	100	--	--	--	--	--	--
NK	N67-H6	--	98	--	--	--	--	--	--
NK	N7070BT	--	109	--	--	--	--	--	--
NK	N7333BT	--	--	--	105	--	--	--	--
NK	N7590BT	102	--	--	105	--	--	--	--
NK	N79-L3	104	--	--	96	--	--	--	--
NK	NX6608	--	95	--	--	--	--	--	--
OTTILIE	5399	--	98	--	--	--	--	--	--
OTTILIE	5480	--	103	--	--	--	--	--	--

(continued)

TABLE 21. WESTERN KANSAS IRRIGATED CORN TEST YIELD SUMMARY, 1997-1999.

		1999 YIELD AS % OF TEST AVERAGE [1]					1997-1999		
BRAND	NAME	STI	THI	GRI	FNI	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
OTTILIE	E82116 EXP	--	115	--	--	--	--	--	--
OTTLIE	5177RRBt	--	96	--	--	--	--	--	--
PFISTER	2652	--	--	--	102	--	--	--	--
PFISTER	3049	--	100	--	--	--	--	--	--
PFISTER	3321	--	110	--	--	--	--	--	--
PIONEER	31B13	118	--	--	--	--	--	--	--
PIONEER	3237	104	--	--	--	--	--	--	--
PIONEER	32P75	--	--	--	119	--	--	--	--
PIONEER	33B50	--	96	--	--	--	--	--	--
PIONEER	33H67	97	--	--	109	--	--	--	--
PIONEER	33P66	--	103	--	106	--	--	--	--
TERRA	TR 1157	--	--	--	89	--	--	--	--
TERRA	TR 1166Bt	--	--	--	105	--	--	--	--
TERRA	TR 1167	--	--	--	100	--	--	--	--
TERRA	TR 1208	--	--	--	96	--	--	--	--
TERRA	TR 702	--	--	--	109	--	--	--	--
TRIUMPH	1141Bt	--	--	--	102	--	--	--	--
TRIUMPH	1514Bt	115	--	--	--	--	--	--	--
TRIUMPH	1866Bt	107	104	--	110	107	--	--	--
US SEEDS	US C1129Bt	--	--	--	73	--	--	--	--
US SEEDS	US C1139RR	--	--	--	94	--	--	--	--
US SEEDS	US C1159	--	--	--	102	--	--	--	--
WILSON	1861Bt	109	--	--	105	--	--	--	--
WILSON	E1046	100	--	--	110	--	--	--	--
WILSON	E4019Bt	--	--	--	104	--	--	--	--
AVERAGES		190	234	--	184	203	--	--	--
CV (%)		10	6	--	9	--	--	--	--
LSD (0.05)**		12	7	--	10	--	--	--	--

1 STI = Sfafford Co. Test, Sandyland Exp. Field, St. John GRI = Greeley Co. Test, SW Res.-Ext. Center, Tribune
THI = Thomas Co. Test, NW Res.-Ext. Center, Colby FNI = Finney Co. Test, SW Res.-Ext. Center, Garden City

2 DYA = Differential Yielding Ability; average difference of hybrid yield compared to average of check hybrids in bushels per acre.

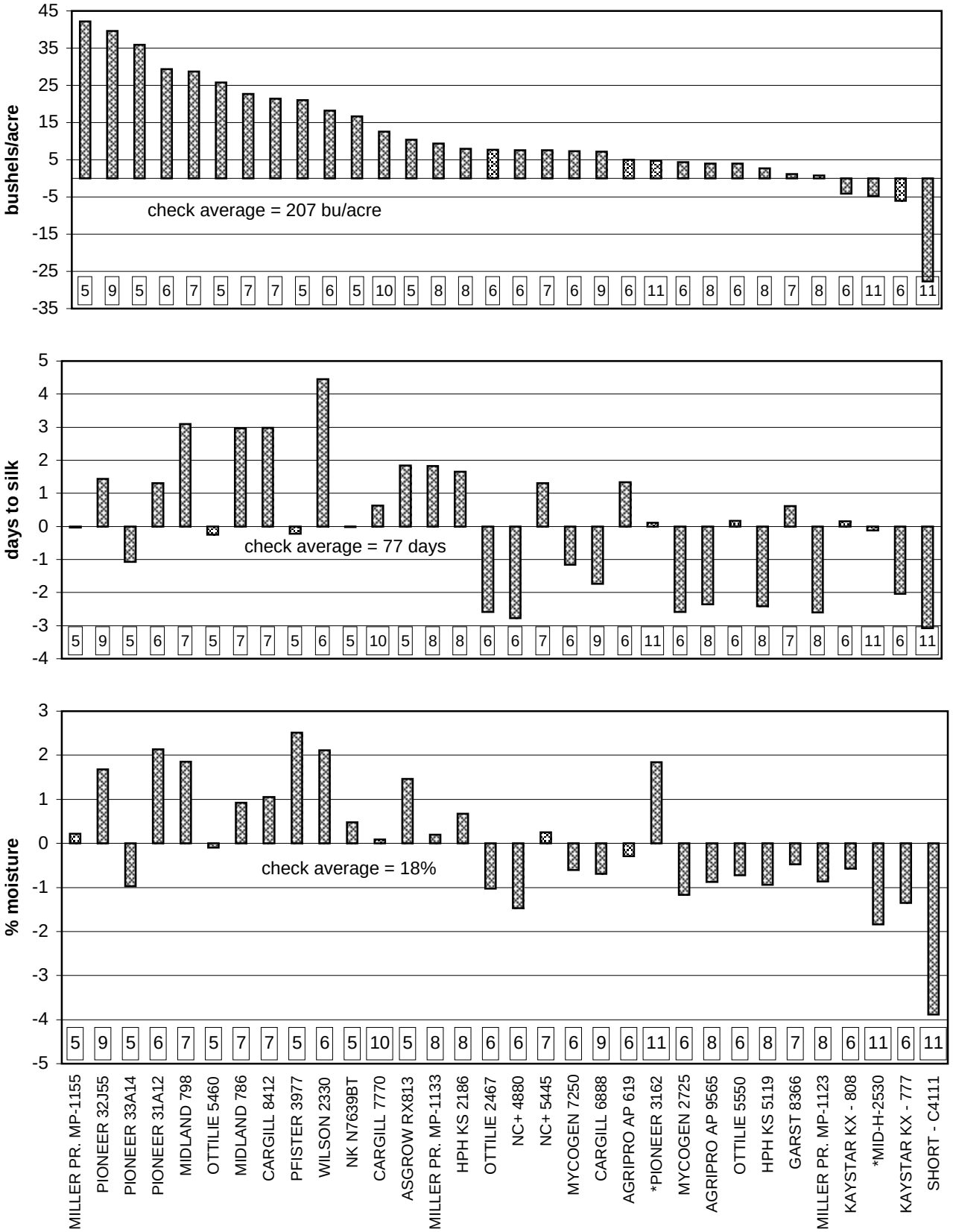
3 SE = Standard Error of DYA; measure of consistency of yield differences.

4 N = Number of tests where hybrid was compared with checks; DYA was calculated only for those with at least 5 comparisons.

c Check hybrid; yield of each hybrid was compared to average yield of these check hybrids.

***** Statistically significantly different from the average of the check hybrids, which = 0 (P < 0.5).

Figure 9. Western Kansas irrigated corn hybrid performance summary, 1997-1999.



Bars show differences between hybrid and average of checks*.
Values in boxes are numbers of tests that compared hybrids and checks.

SOUTHEASTERN KANSAS SHORT-SEASON CORN TEST

COUNTY: LABETTE

LOCATION: Southeast Agricultural Research Center, Parsons

TEST SITE: Parsons silt loam

1998 CROP: Soybean

1997 CROP: --

FERTILIZER (lbs/acre): 116 N 96 P_2O_5 96 K_2O

PLANTING DATE: 4/9/99

HARVEST DATE: 8/26/99

COOPERATORS:

James Long, agronomist

TARGET POPULATION: 22,000 plants/acre, 9.5 in. spacing

FINAL STAND (% of target): 101

SILK DATES: 6/29/99 - 7/4/99

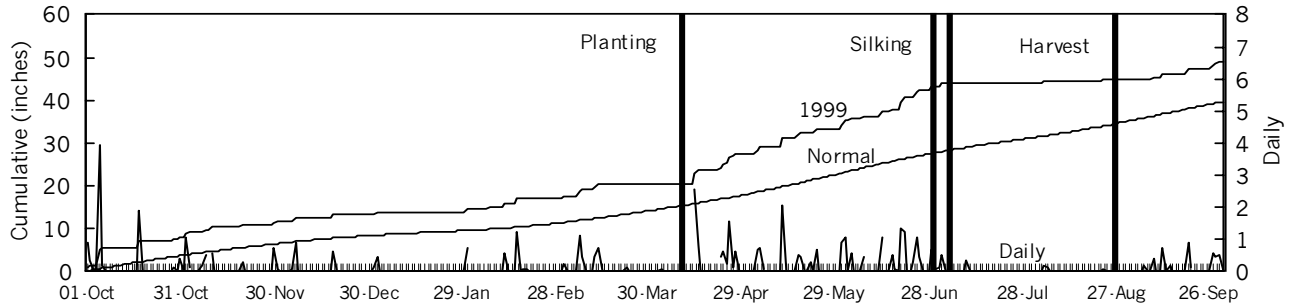
YIELD: **Avg. (bu/a):** 141 **Range (bu/a):** 121 - 164
LSD (bu/a): 12 **CV (%):** 7

CORN BORERS:	Infestation (% plants) ECB	SWCB	Tunnels (in./plant)	Sample date
(susc. hybrid)	--	--	--	--

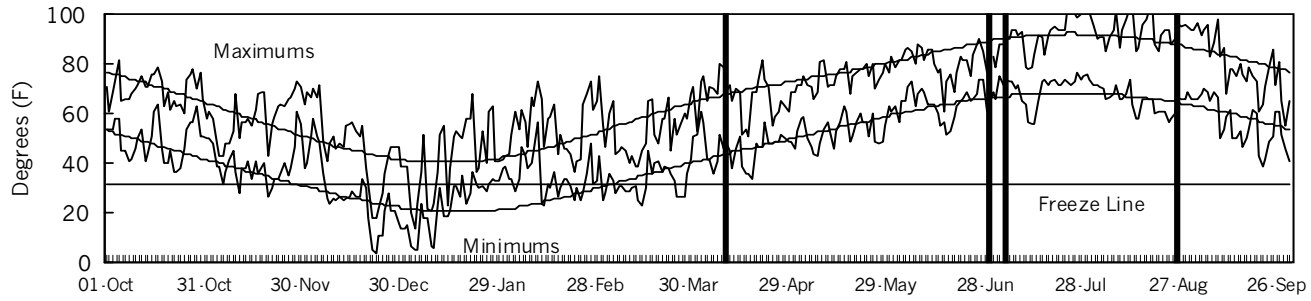
1999 GROWING CONDITONS:

Good stands combined with above-average rainfall until mid-July contributed to excellent dryland yields for this area. Hot, dry conditions after mid-July may have reduced yield potential somewhat.

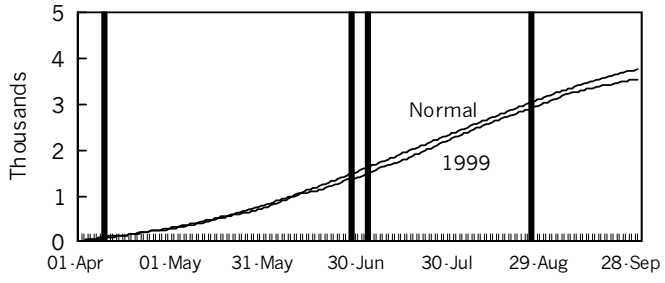
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1999	Precipitation Normal	Average Temp. 1999	Average Temp. Normal	GDD 1999	GDD Normal
April	7.2	3.9	57	58	270	304
May	6.6	4.9	64	66	459	485
June	9.0	4.9	72	75	650	750
July	1.0	3.5	81	80	858	861
August	0.5	3.8	80	78	796	786
Sept.	4.3	4.5	67	70	514	615
Season Totals	28.5	25.4	70	71	3546	3799

TABLE 22. LABETTE CO. SHORT-SEASON CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
NK	N4640BT	147	130	--	138	--	105	116	--	77	13	81	14	101	0	55
PIONEER	34K77	147	--	--	--	--	105	--	--	--	--	81	19	98	0	53
DEKALB	DK551Bty	164	--	--	--	--	117	--	--	--	--	82	15	106	1	54
MATURITY CHECK	SHORT - C4111	122	92	176	107	130	87	83	102	77	14	82	16	114	1	54
NK	N58-D1	153	--	--	--	--	109	--	--	--	--	82	16	101	0	55
TERRA	TR 1058Bt	148	--	--	--	--	105	--	--	--	--	82	16	114	0	54
TERRA	TR 1008Bt	138	--	--	--	--	98	--	--	--	--	82	16	108	0	54
TRIUMPH	8810	130	114	182	122	142	92	102	105	78	15	82	16	94	0	54
US SEEDS	US C1069Bt	126	--	--	--	--	90	--	--	--	--	82	16	111	1	53
DELANGE	DS 1885	121	--	--	--	--	86	--	--	--	--	82	17	87	0	54
GARST	8543Bt/IT	140	--	--	--	--	99	--	--	--	--	82	17	95	0	53
NC+	4880	145	117	--	131	--	103	104	--	78	16	82	17	97	0	53
ASGROW	RX730YG	159	--	--	--	--	113	--	--	--	--	82	18	103	0	53
NC+	3709	134	--	--	--	--	95	--	--	--	--	83	15	97	0	53
CARGILL	4220Bt	153	--	--	--	--	109	--	--	--	--	83	16	109	0	54
DEKALB	DK567	137	--	--	--	--	98	--	--	--	--	83	16	103	0	54
PIONEER	35N05	159	134	--	146	--	113	120	--	78	15	83	16	99	0	55
PIONEER	3563	142	107	181	124	143	101	95	104	78	14	83	16	101	0	56
US SEEDS	US C1029Bt	143	--	--	--	--	102	--	--	--	--	83	16	108	0	54
US SEEDS	US E1050IT	130	--	--	--	--	93	--	--	--	--	83	16	100	0	55
MATURITY CHECK	MID-H-2530	136	115	189	125	146	97	103	109	79	13	84	14	99	0	54
GARST	8560IT	127	--	--	--	--	91	--	--	--	--	84	16	100	1	53
MYCOGEN	2652	134	--	--	--	--	96	--	--	--	--	84	16	101	0	53
DELANGE	DS 1204	124	109	174	117	136	89	97	100	79	15	84	17	93	1	53
MATURITY CHECK	PIONEER 3162	144	138	205	141	162	102	123	118	79	18	85	20	98	0	55
ASGROW	RX740	150	--	--	--	--	107	--	--	--	--	86	18	99	0	55
AVERAGES		141	112	173	126	142	141	112	173	78	14	83	16	101	0	54
CV (%)		7	9	7	--	--	7	9	7	--	--	1	6	8	292	2
LSD (0.05)**		12	12	10	--	--	9	11	6	--	--	1	1	10	NS	1

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

SOUTH CENTRAL KANSAS SHORT-SEASON CORN TEST, IRRIGATED

COUNTY: STAFFORD

LOCATION: Sandyland Experiment Field, St. John

TEST SITE: Naron loamy fine sand

1998 CROP: Wheat

1997 CROP: Fallow

FERTILIZER (lbs/acre): 268 N 46 P_2O_5 0 K_2O

PLANTING DATE: 4/20/99

HARVEST DATE: 9/30/99

COOPERATORS:

Victor Martin, agronomist; Ron Cunningham and Jeff Scott, technicians

TARGET POPULATION: 32,200 plants/acre, 6.5 in. spacing

FINAL STAND (% of target): 95

SILK DATES: 7/3/99 - 7/8/99

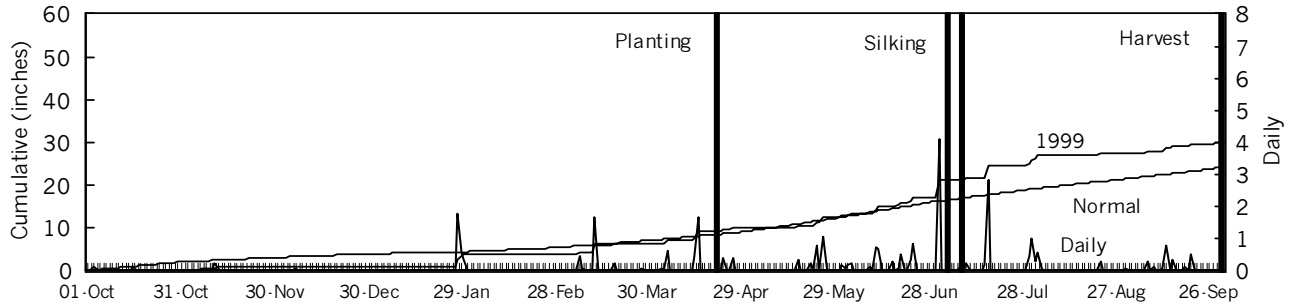
YIELD: **Avg. (bu/a):** 175 **Range (bu/a):** 148 - 213
LSD (bu/a): 14 **CV (%):** 7

	Infestation (% plants)		Tunnels	Sample
CORN BORERS:	**ECB**	**SWCB**	**(in./plant)**	**date**
(susc. hybrid)	0	25	1	9/3/99

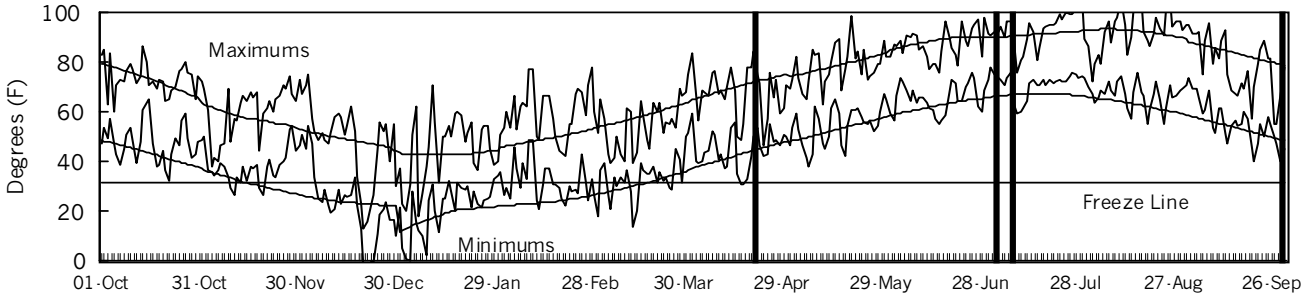
1999 GROWING CONDITONS:

Conditions were cool and wet at planting. Stands were reduced somewhat at V4 - V5, when several plants snapped off at the base. The cause of the breaking was undetermined but may have been strong wind. Herbicide history did not appear to be a factor. Southwestern corn borers were present but appeared to cause little lodging or ear drop at harvest. An insecticide application reduced the potential for corn borer damage. Weed control was excellent. Hot, dry conditions predominated from August until harvest in late September.

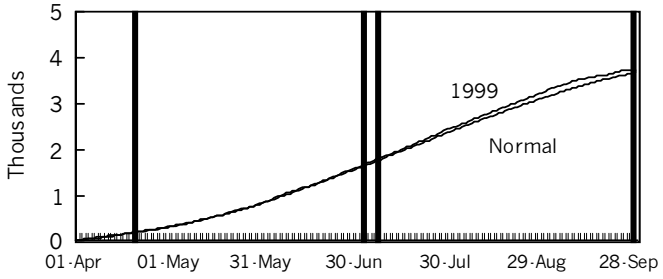
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1999	Normal	1999	Normal	1999	Normal
April	3.7	2.1	57	57	288	320
May	2.7	3.3	67	66	528	493
June	4.3	3.8	77	76	747	756
July	9.0	2.9	83	79	883	851
August	1.4	2.4	80	78	806	734
Sept.	2.4	2.5	67	69	507	559
Season Totals	23.4	16.9	72	71	3759	3714

TABLE 23. STAFFORD CO. IRRIGATED SHORT-SEASON CORN PERFORMANCE TEST RESULTS, 1997-1999.

		ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			98-99		1999				
BRAND	NAME	1999	1998	1997	2-Yr. AVG.	3-Yr. AVG.	1999	1998	1997	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	157	171	200	164	176	90	87	97	70	12	74	14	91	0	59
CARGILL	4220Bt	180	--	--	--	--	103	--	--	--	--	76	14	98	0	58
DEKALB	DK567	148	--	--	--	--	85	--	--	--	--	76	14	88	0	58
DELANGE	DS 1885	164	204	--	184	--	94	103	--	73	12	76	14	83	0	57
GARST	P834	158	--	--	--	--	90	--	--	--	--	76	14	87	0	57
PIONEER	35N05	184	210	--	197	--	105	107	--	73	13	76	15	97	0	60
GARST	8543Bt/IT	213	--	--	--	--	121	--	--	--	--	76	16	101	0	57
TERRA	TR 1097	165	--	--	--	--	94	--	--	--	--	76	16	96	0	57
MATURITY CHECK	MID-H-2530	199	205	210	202	205	114	104	102	75	13	77	14	99	0	58
TRIUMPH	1141	177	213	206	195	199	101	108	99	73	14	77	17	97	0	57
MYCOGEN	2652	160	--	--	--	--	91	--	--	--	--	78	13	96	0	57
DEKALB	DK589Bty	185	--	--	--	--	106	--	--	--	--	78	15	110	0	57
PIONEER	34R07	200	--	--	--	--	114	--	--	--	--	78	15	98	0	59
MATURITY CHECK	PIONEER 3162	172	207	218	189	199	98	105	105	75	15	78	18	99	0	61
DELANGE	DS 1204	153	197	218	175	189	87	100	105	75	12	79	14	81	0	57
TERRA	TR1087Bt	187	--	--	--	--	107	--	--	--	--	79	15	104	0	57
AVERAGES		175	197	207	186	193	175	197	207	73	13	77	15	95	0	58
CV (%)		7	7	8	--	--	7	7	8	--	--	2	4	7	0	1
LSD (0.05)**		14	17	20	--	--	8	8	10	--	--	1	1	7	0	1

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

TABLE 24. KANSAS SHORT-SEASON CORN TEST YIELD SUMMARY, 1997-1999.

			1999 YIELD AS % OF TEST AVERAGE [1]				1997-1999		
	BRAND	NAME	FRS	LBS	SIS	AVG.	DYA (bu/a) [2]	S.E. [3]	N [4]
c	MATURITY CHECK	PIONEER 3162	--	102	98	100	4	3	8
	PIONEER	35N05	--	113	105	109	3	6	5
c	MATURITY CHECK	MID-H-2530	--	97	114	105	-4	3	8
	PIONEER	3563	--	101	--	--	-6	3	7
	TRIUMPH	8810	--	92	--	--	-8	4	5
	DELANGE	DS 1204	--	89	87	88	-14 *	4	8
	MATURITY CHECK	SHORT - C4111	--	87	90	88	-25 *	3	8
	ASGROW	RX730YG	--	113	--	--	--	--	--
	ASGROW	RX740	--	107	--	--	--	--	--
	CARGILL	4220Bt	--	109	103	106	--	--	--
	DEKALB	DK551Bty	--	117	--	--	--	--	--
	DEKALB	DK567	--	98	85	91	--	--	--
	DEKALB	DK589Bty	--	--	106	--	--	--	--
	DELANGE	DS 1885	--	86	94	90	--	--	--
	GARST	8543Bt/IT	--	99	121	110	--	--	--
	GARST	8560IT	--	91	--	--	--	--	--
	GARST	P834	--	--	90	--	--	--	--
	MYCOGEN	2652	--	96	91	93	--	--	--
	NC+	3709	--	95	--	--	--	--	--
	NC+	4880	--	103	--	--	--	--	--
	NK	N4640BT	--	105	--	--	--	--	--
	NK	N58-D1	--	109	--	--	--	--	--
	PIONEER	34K77	--	105	--	--	--	--	--
	PIONEER	34R07	--	--	114	--	--	--	--
	TERRA	TR 1008Bt	--	98	--	--	--	--	--
	TERRA	TR 1058Bt	--	105	--	--	--	--	--
	TERRA	TR 1097	--	--	94	--	--	--	--
	TERRA	TR1087Bt	--	--	107	--	--	--	--
	TRIUMPH	1141	--	--	101	--	--	--	--
	US SEEDS	US C1029Bt	--	102	--	--	--	--	--
	US SEEDS	US C1069Bt	--	90	--	--	--	--	--
	US SEEDS	US E1050IT	--	93	--	--	--	--	--
	AVERAGES		--	141	175	158	--	--	--
	CV (%)		--	7	7	--	--	--	--
	LSD (0.05)**		--	9	8	--	--	--	--

1 FRS = Franklin Co. Test, East Central Exp. Field, Ottawa LBS = Labette Co. Test, SE Res. Center, Parsons
SIS = Stafford Co. Irrigated Test, Sandyland Exp. Field, St. John

2 DYA = Differential Yielding Ability; average difference of hybrid yield compared to average of check hybrids in bushels per acre.

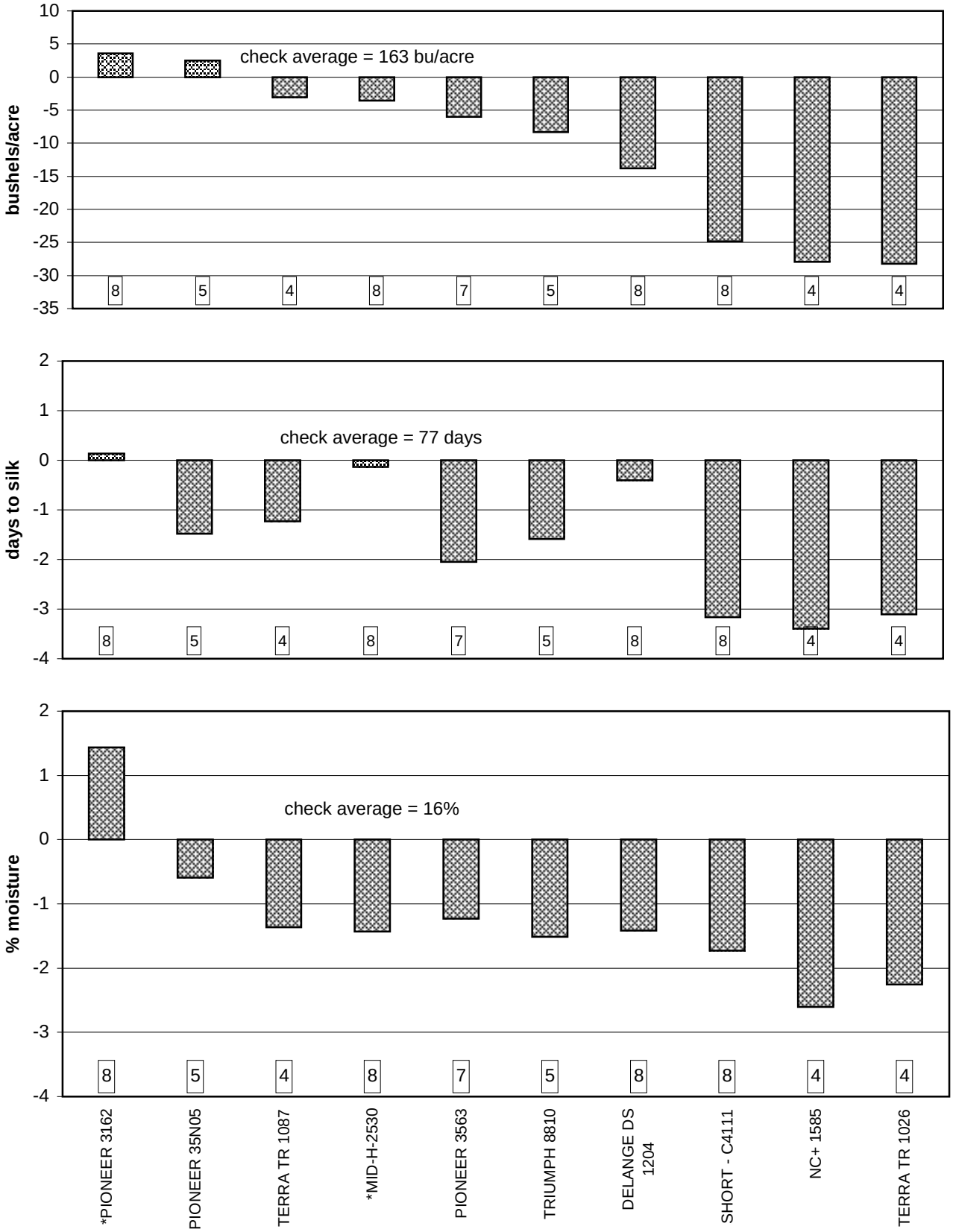
3 SE = Standard Error of DYA; measure of consistency of yield differences.

4 N = Number of tests where hybrid was compared with checks; DYA was calculated only for those with at least 4 comparisons.

c Check hybrid; yield of each hybrid was compared to average yield of these check hybrids.

***** Statistically significantly different from the average of the check hybrids, which = 0 ($P < 0.5$).

Figure 10. Kansas short-season corn hybrid performance summary, 1997-1999.



Bars show differences between hybrid and average of checks*.
Values in boxes are numbers of tests that compared hybrids and checks.

APPENDIX 1: Entrants in the 1999 Kansas Corn Performance Tests

AgSource
Ken Rose
AgSource Seeds, Inc.
1717 East 8th St.
Boone, IA 50036
(515) 432-8100

Asgrow
Shannon Alston
Asgrow Seed Co.
10598 Bison Rd.
Dodge City, KS 67801
316-338-8821

Asgrow
Lance Nobert
Asgrow Seed Co.
5622 NW87th Terr. #300
Kansas City, MO 64154
816-584-1171

Cargill
John Brutty
Cargill Hybrid Seeds
1609 9th St.
Highway 34 West
Columbus, NE 68601
402-564-9767

DeKalb
Diane Freeman
Monsanto
3100 Sycamore Rd.
DeKalb, IL 60115
815-758-9323

DeLange
Steve Ahring
DeLange Seed (AGSECO)
P.O. Box 7
Girard, KS 66743
316-724-6223

Fontanelle
Steven P. Pike
Fontanelle Hybrids
10981 8th St.
Nickerson, NE 68044-9706
402-721-1410

Freedom
John Sledge
Freedom Seed Co.
#1 Seed Corn Road
Astoria, IL 61501
800-262-4480

Frontier
Billy McClenney
Frontier Hybrids
P.O. Box 177
Abernathy, TX 79311
806-298-2595

Garst
Jeff Schaef
Garst Seed Co.
219 E. Garfield
Greensburg, KS 67054
316-723-2454

Hawkeye
Arlen Eggerling
Hawkeye Hybrids, Inc.
2165 Idaho Drive
Pella, IA 50219
515-628-3827

Hoegemeyer
Don Moeller
Hoegemeyer Hybrids
1755 Hoegemeyer Rd.
Hooper, NE 68031-2125
402-654-3399

Hytest
Jim Kurzanski
Agribiotech, Inc.
120 Corporate Park Drive
Henderson, NV 89014
(702) 566-2440

Kaystar
Darin Huber
Kaystar Seed
P.O. Box 947
Huron, SD 57350
605-352-5750

Lewis
Scott Lewis
Lewis Hybrids Inc.
P.O. Box 38
W. Maple St.
Ursa, IL 62376
217-964-2131

LG Seeds
Leonard Luebker
LG Seeds
3551 Cty Rd. F Box 88
Tekamah, NE 68061
800-752-6574

Midland
Ron Sylvester
Midland Seeds, Inc.
1906 Kingman Rd.
Ottawa, KS 66067
800-819-SEED

Miller Preferred
Ron Gardner
Miller Preferred Seeds
43203 Rd 728
Edison, NE 68936-3600
308-927-2585

(continued)

APPENDIX 1: Entrants in the 1999 Kansas Corn Performance Tests

MSG
Mark Gruhn
Midwest Seed Genetics
P.O. Box 518
Carroll, IA 51401
800-369-8218

Mycogen
Kelly Montgomery
Mycogen Seeds
1340 Corp Ctr Crv
PO Box 21428
Eagan, MN 55121-1233
800-380-7282

NC+
Wes Zart
NC+ Hybrids
P.O. Box 4408
1300 N. 79th
Lincoln, NE 68504
402-467-2517

Net
Mark Porter
NetSeeds
9001 Hickman Rd. Suite 320
Urbandale, IA 50322
515-331-0939

NK
Marcus Schwartz
Novartis Seeds, Inc.
1060 Wheatland Dr.
Buhler, KS 67522
316-543-2707

Ottilie
Jim Ottilie
Ottilie RO Seed
1462 Sanford Ave.
Marshalltown, IA 50158
515-753-5561

Pfister
Ron Romersberger
Pfister Hybrid Corn Co.
P.O. Box 187
El Paso, IL 61738
309-527-6000

Pioneer
Brad Lance
Pioneer Hi-Bred Intl., Inc.
1616 S. Kentucky St.
Suite C-150
Amarillo, TX 79102
806-356-0160

Premium Seed
Betty M. Shaw
Premium Seed, Inc.
P.O. Box 218
Berwick, IL 61417
309-462-2396

PSA
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PSA Genetics LLC
661 510th St.
Alta, IA 51002
712-296-3663

Renze
Tim Renze
Renze Hybrids
27410 Kittyhawk Ave.
Carroll, IA 51401
712-669-3301

Terra
Matt Fox
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PO Box 6000
Sioux City, IA 51106
712-277-1340

Triumph
Ben Benton
Triumph Seed Co. Inc.
P.O. Box 1050
Ralls, TX 79357
806-253-2584

US Seeds
Harold Davis
United Suppliers, Inc.
30473 260th St
PO Box 538
Eldora, IA 50627
515-858-2341

Wilson
Jerry F. Strissel
Wilson Seeds, Inc.
PO Box 391
Harlan, IA 51537
712-755-3841

APPENDIX 2: Entries in the 1999 Kansas Corn Performance Tests

AGSOURCE	GDD	DBL	GRN	RES	P	F*
6212	2720	112	FG		N	Y
EXP9114	2770	114			N	Y
EXP9116	2850	116			N	Y
7890	2885	118			N	Y

ASGROW	GDD	DBL	GRN	RES	P	F*
RX638YG	2450	107		Bt	Y	N
RX686RR/YG	2500	108		RR,Bt	N	Y
RX730YG	2550	111		Bt	N	Y
RX738RR	2560	111		RR	N	Y
RX740	2560	111			N	Y
RX799Bt	2650	114		Bt	N	Y
RX813	2650	114	FG		N	Y
RX889	2650	117			Y	Y
RX897IMI	2700	118		IMI	N	Y

CARGILL	GDD	DBL	GRN	RES	P	F*
4220Bt	2482	107		Bt	N	Y
6888	2500	112			N	Y
7770	2606	114			N	Y
8412	2723	117	FG		N	Y

DEKALB	GDD	DBL	GRN	RES	P	F*
DK551Bty	2645	105		Bt	Y	Y
DK567	2650	106			Y	Y
DK579	2730	107			Y	Y
DK589Bty	2720	108		Bt	Y	Y
DK595Bty	2720	109		Bt	Y	Y
DK611	2780	111			Y	Y
DK626Bty	2770	112		Bt	Y	Y
DK647Bty	2800	114		Bt	Y	Y
DK655	2800	115			Y	Y
DK679Bty	2885	117		Bt	Y	Y
DK697	2975	119			Y	Y

DELANGE	GDD	DBL	GRN	RES	P	F*
DS 1204	2500	104	Wax		Y	Y
DS 1885	2500	105			Y	Y
DS 1995	2700	114			Y	Y
DS 1997	2720	114			Y	Y

FONTANELLE	GDD	DBL	GRN	RES	P	F*
HC7766Bt				Bt	N	Y
HC7879Bt				Bt	N	Y

FREEDOM	GDD	DBL	GRN	RES	P	F*
5503	2520	107	FG		N	Y
5680	2620	110			N	Y

FRONTIER	GDD	DBL	GRN	RES	P	F*
F3175	2880	116	FG			Y
F3200	2880	118	FG			Y

GARST	GDD	DBL	GRN	RES	P	F*
8600BLT	2510	105		Bt,LL,IT	N	Y
8560IT	2540	106		IT	Y	Y
8541IT	2560	108		IT	N	Y
P834	2560	109			N	Y
8543Bt/IT	2570	109		Bt,IT	N	Y
8539BLT	2555	110		Bt,LL,IT	N	Y
8546	2570	110			N	Y
8464	2570	111			N	Y
8366Bt/LL	2580	113		Bt,LL	N	Y
8342GLS/IT	2610	114		GLS,IT	N	Y
8325Bt	2610	115		Bt	N	Y
8300GLS/IT	2630	116		GLS,IT	N	Y
8315	2600	117			N	Y
8285	2670	118			N	Y
8222IT	2670	119	FG	IT	N	Y

HAWKEYE	GDD	DBL	GRN	RES	P	F*
SX44A	2570	108			N	Y
SX60	2595	110			N	Y
SX76	2605	111			N	Y
6939BT	2620	112		Bt	N	Y
9191	2630	113			N	Y

HIGH CYCLE	GDD	DBL	GRN	RES	P	F*
HC7734RR				RR	N	Y
HC-7766Bt				Bt	N	Y
HC-7879Bt				Bt	N	Y

HOEGEMEYER	GDD	DBL	GRN	RES	P	F*
2623	2500	108			N	Y
2649	2550	109			N	Y
2650	2560	110			N	Y
2666	2610	112			N	Y
2668	2620	113			N	Y
2693	2650	115			N	Y
2683	2670	116			Y	Y
2718	2680	116			N	Y
2730	2700	117			N	Y
2761	2720	118			N	Y

HYTEST	GDD	DBL	GRN	RES	P	F*
BH4612	2495					Y
HT7705	2525					Y
BH4748	2600					Y
HT7722	2650					Y
HT7820	2700					Y

*GDD = Growing Degree Days; DBL = Days to Black Layer; GRN = Grain characteristics (FG = Food Grade, Wax = Waxy); RES = Herbicide, disease, and insect resistance traits (Bt = corn borer protection via Bacillus thuringiensis, IMI, IT = Imidazolinone Resistant/Tolerant, ECB = European Corn Borer Resistance, LL = Liberty Link, RR = Roundup Ready, GLS = Gray Leaf Spot); P = Prolific; F = Flex ear; values provided by entrants.

(continued)

APPENDIX 2: Entries in the 1999 Kansas Corn Performance Tests

KAYSTAR	GDD	DBL	GRN	RES	P	F*
8900RR				RR	N	Y
KX - 790					N	Y

LEWIS	GDD	DBL	GRN	RES	P	F*
5559	2570	112				Y
6578RR	2580	112		RR	Y	Y
6281Bt	2650	116		Bt	Y	Y
8268	2700	118			Y	Y

LG SEEDS	GDD	DBL	GRN	RES	P	F*
LG2584BT	2515	109		Bt	N	Y
LG2579	2520	109			N	Y
LG2616	2530	111			N	Y
LG2599BT	2550	112		Bt	N	Y
LG2694	2600	116			N	Y
LG2726	2635	118	FG		N	Y

MIDLAND	GDD	DBL	GRN	RES	P	F*
783					Y	Y
785RR				RR	Y	Y
795					Y	Y
799Bt				Bt	Y	Y
7A04Bt				Bt	Y	Y
7A08					Y	Y
7E04					Y	Y
XA130 EXP					Y	Y
XA160 EXP					Y	Y
XB140W EXP					Y	Y
747		114			Y	Y
764		116			Y	Y
774	2665	117			Y	Y
798		118			Y	Y
786	2690	118			Y	Y

MILLER PREF.	GDD	DBL	GRN	RES	P	F*
MP-1123		112			N	Y
MP-1154		115			N	Y
MP-1155		115			N	Y

MSG	GDD	DBL	GRN	RES	P	F*
G 8699	2560	114			N	Y
G 8758Bt		115		Bt	N	Y
G 8795		117			N	Y

MYCOGEN	GDD	DBL	GRN	RES	P	F*
2652	2615	106			N	Y
2717	2690	110		Bt	N	N
2725	2700	111			N	Y
2787	2775	113		Bt	N	Y
2799	2745	114		Bt	N	N
2828	2780	115			N	Y
2888IMI	2860	118		IMT	N	Y

NC+	GDD	DBL	GRN	RES	P	F*
3709	2450	107			Y	Y
3877	2420	108			Y	N
4616	2425	111			Y	Y
4880	2430	112			N	Y
5018	2440	112			Y	Y
5778	2510	114			Y	Y
5445	2515	114			N	Y
5529	2530	114	FG		Y	Y
5588B		115		Bt	?	?
5999	2520	116			?	Y
5878B		117		Bt	?	Y
6619B		117		Bt	?	Y
6868	2590	118			?	?

NET	GDD	DBL	GRN	RES	P	F*
1105						
1167						
1177						

NK	GDD	DBL	GRN	RES	P	F*
N58-D1				Bt,LL	N	Y
N67-H6					N	Y
NX6608				Bt,LL	N	Y
N4640BT	2530	104		Bt,LL	N	Y
N59-Q9	2680	109			N	Y
N65-A1	2690	111		Bt,LL	N	Y
N7070BT	2760	114		Bt,LL	N	Y
N7333BT	2780	114		Bt,LL	N	Y
N7639BT	2800	115		Bt,LL	N	Y
N7590BT	2810	115		Bt,LL	N	Y
N79-L3	2830	118		Bt,LL	N	Y
4662	2870	119			N	Y
N83-N5	2880	119			N	Y

OTTLIE	GDD	DBL	GRN	RES	P	F*
5177RRBt			YD	RR,Bt	Y	Y
2467	2640	111	YD		Y	Y
5399	2770	113	YD		Y	Y
5480	2800	114	FG		Y	Y
E82116 EXP	2800	115	FG		Y	Y

*GDD = Growing Degree Days; DBL = Days to Black Layer; GRN = Grain characteristics (FG = Food Grade, Wax = Waxy); RES = Herbicide, disease, and insect resistance traits (Bt = corn borer protection via Bacillus thuringiensis, IMI, IT = Imidazolinone Resistant/Tolerant, ECB = European Corn Borer Resistance, LL = Liberty Link, RR = Roundup Ready, GLS = Gray Leaf Spot); P = Prolific; F = Flex ear; values provided by entrants.

(continued)

APPENDIX 2: Entries in the 1999 Kansas Corn Performance Tests

PFISTER	GDD	DBL	GRN	RES	P	F*
2652	2725	110			N	Y
3049	2750	111			N	Y
3321		115				Y
3977		117				Y

PIONEER	GDD	DBL	GRN	RES	P	F*
36D14	2470	103		IMIT	Y	Y
3563	2530	105			Y	Y
35P12	2530	105			Y	Y
35N05	2570	107		Bt	Y	Y
34R07	2630	109		Bt	Y	Y
34K77	2660	110	FG		Y	Y
33B50	2680	111	FG		Y	Y
33R87	2680	111	FG		Y	Y
33V08	2680	111		Bt	Y	Y
33A14	2710	112		Bt	Y	Y
33H67	2710	112	FG		Y	Y
32J55	2740	113			Y	Y
33G26	2740	113	FG		Y	Y
33P66	2740	113	FG		Y	Y
3237	2760	114	?		Y	Y
32K61	2760	114			Y	Y
31A12	2810	116			Y	Y
32P75	2810	116			Y	Y
31B13	2840	117		Bt	Y	Y

PREMIUM	GDD	DBL	GRN	RES	P	F*
P265	2700	114			N	Y

PSA	GDD	DBL	GRN	RES	P	F*
7727	2510	112			N	Y
7793IM	2520	113		IMI	N	Y
4700Bt	2530	114		Bt	N	Y
7864	2570	116			N	Y

RENZE	GDD	DBL	GRN	RES	P	F*
6386	2605	112	FG		N	Y
8389BT	2640	114		Bt	N	Y
6469	2660	115			N	Y
6480	2665	116			N	Y
8418BT	2680	116		Bt	N	Y

TERRA	GDD	DBL	GRN	RES	P	F*
TR 1058Bt	2450	105		Bt		
TR 1008Bt	2400	108		Bt		
TR1087Bt	2560	108		Bt		
TR 1097	2600	109				
TR 1109NE	2570	110	NE			
TR 1128	2600	112				
TR 1148	2650	114			N	Y
TR 1157	2680	115			N	Y
TR 1166Bt	2700	116		Bt		
TR 1167	2700	116				
TR 1208	2720	120				
TR 702	2780	120			N	Y

TRIUMPH	GDD	DBL	GRN	RES	P	F*
4542	2330	104			N	Y
8810	2410	107			N	Y
8810Bt	2410	107		Bt	N	Y
1141	2470	110			N	Y
1141Bt	2470	110		Bt	N	Y
1514Bt	2550	114		Bt	N	Y
1866	2610	117			N	Y
1866Bt	2610	117		Bt	N	Y
2010	2650	118			N	Y

US SEEDS	GDD	DBL	GRN	RES	P	F*
US E1120					N	Y
US C1009RR	2380	100		RR	N	Y
US C1029Bt	2400	102		Bt	N	Y
US E1050IT	2525	105		IT	N	Y
US C1069Bt	2500	106		Bt	N	Y
US C1079RR	2510	107		RR	N	Y
US C1099	2560	109			N	Y
US C1119RR	2570	111		RR	N	Y
US C1129	2590	112			N	Y
US C1129Bt	2590	112		Bt	N	Y
US C1139RR	2600	113		RR	N	Y
US C1159	2610	115			N	Y

WILSON	GDD	DBL	GRN	RES	P	F*
E4011	2750	110			N	Y
1664	2775	111			N	Y
E4019Bt	2780	112		Bt	N	Y
E1046	2800	115			N	Y
1861Bt	2825	116		Bt	N	Y
2330	2975	120			N	Y
2335	3000	120			N	Y

MATURITY CHECK	GDD	DBL	GRN	RES	P	F*
SHORT - C4111		102				
MID-H-2530		110				
PIONEER 3162	2770	118	FG		N	Y

*GDD = Growing Degree Days; DBL = Days to Black Layer; GRN = Grain characteristics (FG = Food Grade, Wax = Waxy); RES = Herbicide, disease, and insect resistance traits (Bt = corn borer protection via Bacillus thuringiensis, IMI, IT = Imidazolinone Resistant/Tolerant, ECB = European Corn Borer Resistance, LL = Liberty Link, RR = Roundup Ready, GLS = Gray Leaf Spot); P = Prolific; F = Flex ear; values provided by entrants.

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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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