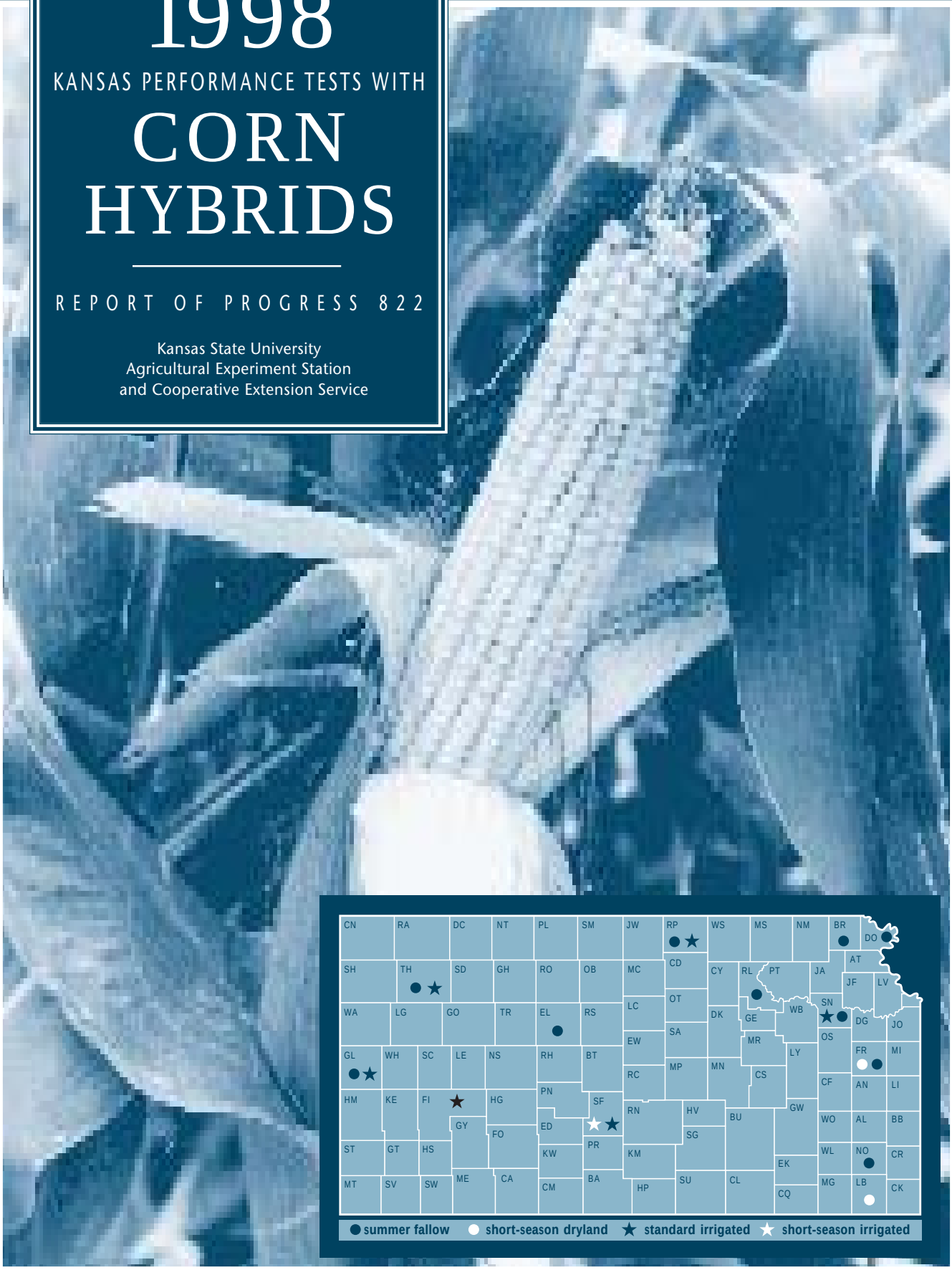
1998

KANSAS PERFORMANCE TESTS WITH

CORN HYBRIDS

REPORT OF PROGRESS 822

Kansas State University
Agricultural Experiment Station
and Cooperative Extension Service



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Contribution No. 99-199-S from the Kansas Agricultural Experiment Station.

1998 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 1998 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 1998 and normal. All graphs include vertical lines indicating planting, silking, and harvest dates, if available. General trends in precipitation and rainfall 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. Comparisons of the current year's weather with long-time averages often help explain unusual plant development patterns and inconsistent performance of individual hybrids over years.

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, 12, 16, 21, 25) present yield as a percent of the average for each location and summarize hybrid performance over the past few years in that region. Tables 22-25 contain results from the short-season tests. The 1998 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. The performance of the marketed product includes stand establishment as well as genetic yield potential.

Tractor-powered, modified, White air-planters were used for nearly all tests. Except for the Finney County test where space was limited, 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 45 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.

1998 STATEWIDE GROWING CONDITIONS

Temperature and rainfall distribution for the 1998 season followed a somewhat unusual pattern. Figure 1 shows the maximum and minimum temperatures recorded in the state for each week of the season. Figure 2 illustrates topsoil moisture status, which closely reflects rainfall patterns but lags slightly. High temperatures approaching or exceeding 100°F accompanied low rainfall in May and early June, creating the potential for significant prereproductive stress in many areas. Rains fell over much of the state

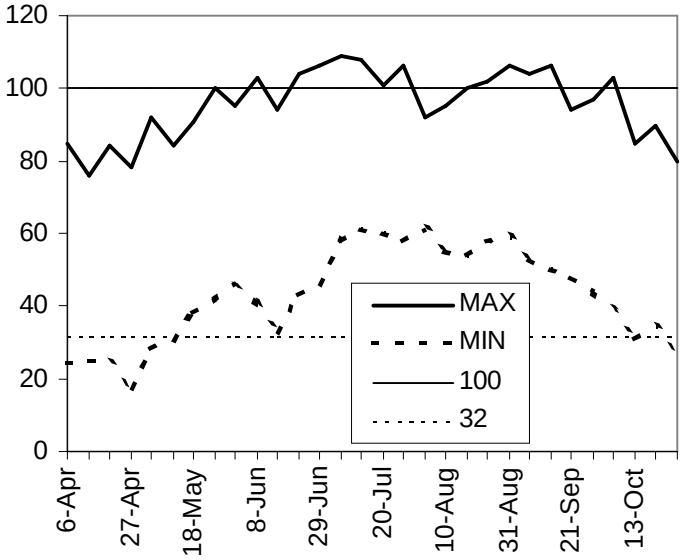


Figure 1. 1998 Kansas weekly maximum and minimum temperatures.

during July providing much-needed moisture for pollination and early grain filling. Hot, dry conditions returned in August, causing rapid maturation and grain dry-down. Rains returned in late September and October, but harvest continued to progress rapidly until the end of October, when it was nearly complete.

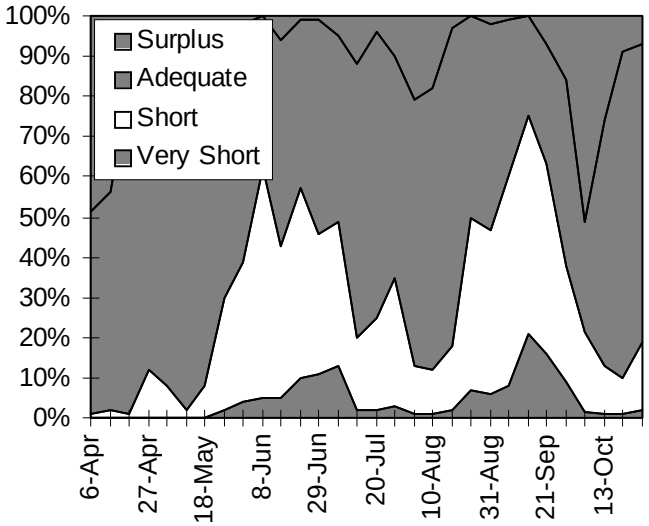


Figure 2. Statewide topsoil moisture status.

Over 95% of the corn crop was rated fair or better by the Kansas Department of Agriculture for most of the growing season (Figure 3). The only exception was in late June following several weeks of hot, dry weather when 8% of the crop was rated poor or very poor. Adequate precipitation in July and early August improved the condition of the crop, so that 96% or more of the crop after mid-July was rated fair, good, or excellent.

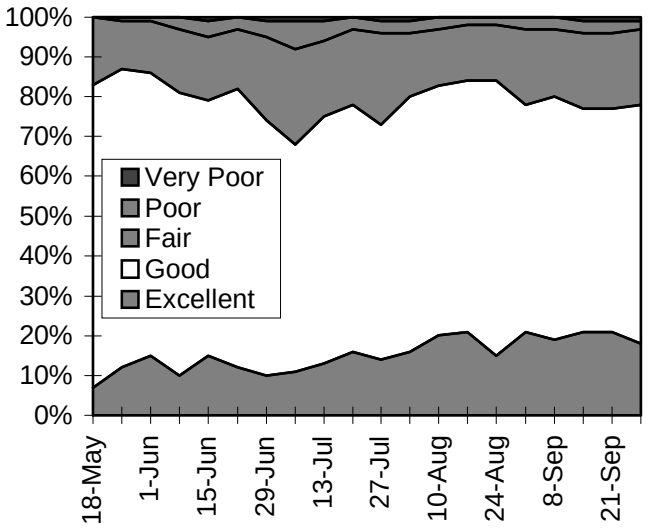


Figure 3. 1998 Kansas corn crop condition.

The 1998 crop was ahead of previous years at almost every stage of development (Figure 4). Planting started only slightly earlier than normal but jumped far ahead in late April and early May. Warm temperatures in May and June combined with the generally early planting resulted in early silking. Harvest was even farther ahead of the 5-year average likely because of the high temperatures in August and early September. (From Crop-Weather reports, Kansas Agricultural Statistics, Topeka).

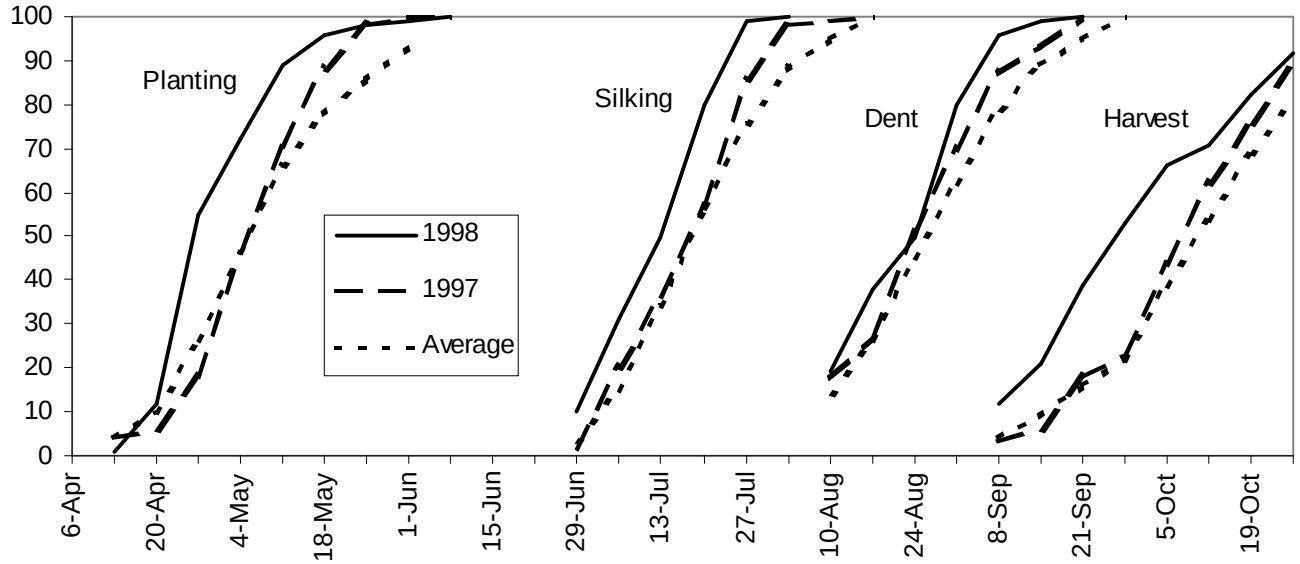


Figure 4. 1998 Kansas corn crop progress.

A number of insects caused problems early in the season. During May, flea beetles were active in northeast Kansas, although damage was relatively light. Cutworm damage was also low. Some billbug damage developed in Atchison County in nutsedge-infested fields. Trace chinch bug damage was observed in Riley County. Southern corn leaf beetle, observed for the first time in 1997 after an 80-year absence, reappeared in Doniphan County. Rescue treatments were applied in some instances. At this point, recorded sightings of this insect are limited to Doniphan, Brown, and Atchinson counties. Scattered wireworm infestations developed. Severe damage was reported from one field in Cowley County. Corn rootworm larvae were active in June. Serious root pruning was observed at Manhattan in a field of continuous corn where no preventative treatment had been applied. By early July, adult beetles were present throughout much of the state.

By June 1, whorl infestations of first generation European corn borer began to appear. By June 23, survey personnel recorded 10% of the plants with whorl damage in some fields in Brown County, 28% in Jackson County, and 46% in Butler County. First generation infestations are not considered serious until damage reaches or exceeds 50% of plants with signs of shot-hole injury. Fortunately, populations were lower than normal this year. Southwestern corn borer was active south of the Arkansas River. Possible SWCB damage occurred as far north as Ellis County.

As is usual, Banks grass mites were active in much of the irrigated production areas in the western third of the state. By July 1, mites with lots of eggs were active in most areas of extreme southwest Kansas, with levels ranging from a trace up to 25% of the leaf area infested. Infestations in this area persisted through July and into August. (From Leroy Brooks, Extension Entomologist, Kansas State University Department of Entomology.)

Nineteen ninety-eight was an interesting year for corn diseases. The year started out on a good note with relatively few problems. The dry weather in May reduced primary infections of gray leaf spot and anthracnose, and thus, disease levels remained well below the threshold for treatment across the entire state. However, levels of Stewart's wilt remained high because of large numbers of flea beetles. A series of years with above-normal winter temperatures has allowed the flea beetle population to increase over time, and the number of beetles carrying the Stewart's wilt bacterium also has increased. Fortunately, we have seen only foliar symptoms of the disease, which are of minor importance, and not the systemic phase of this disease, which can cause significant yield loss.

Increased disease pressure was observed in the second half of the season. Gray leaf spot levels exploded in some fields in southwestern Kansas around the time corn was in the milk stage of development, resulting in some yield loss. The late-season increase in gray leaf spot coupled with periods of high heat stress provided ideal conditions for the development of Fusarium stalk rot across a wide area of the state. Yield losses of 10 percent or more have been reported from many areas of the state. In northeast Kansas, many of the earliest planted corn fields developed high levels of anthracnose stalk rot.

Finally, an extended period of high temperature and humidity and a prolonged drought resulted in high levels of *Aspergillus flavus* in many southeastern and south central Kansas corn fields. Aspergillus is the ear mold fungus responsible for producing aflatoxin. The good news is that generally, the levels of aflatoxin in infested fields were low enough that the corn still retained many of its uses.

Because of the late-season development of gray leaf spot, high levels of inoculum will be available for next year, and producers should pay close attention to the gray leaf spot rating of hybrids if they live in an area of the state prone to this disease. (From Doug Jardine, Extension Plant Pathologist, Kansas State University Department of Plant Pathology.)

The October 9 Crops Report predicted a record 410.4 million bushel crop, up 6% from last year’s record crop. This production is from 2.85 million harvested acres, up 6% from last year. The predicted average yield of 144 bushels per acre is 1 bushel above that in 1997. (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

1997CROP: Soybeans

1996 CROP: Corn

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

PLANTING DATE: 4/24/98

HARVEST DATE: 10/1/98

COOPERATORS:

Fuhrman Farms, Inc.

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

STAND (% of target): 113

YIELD: Average (bu/a): 221

Range (bu/a): 160 - 254

LSD (bu/a): 19

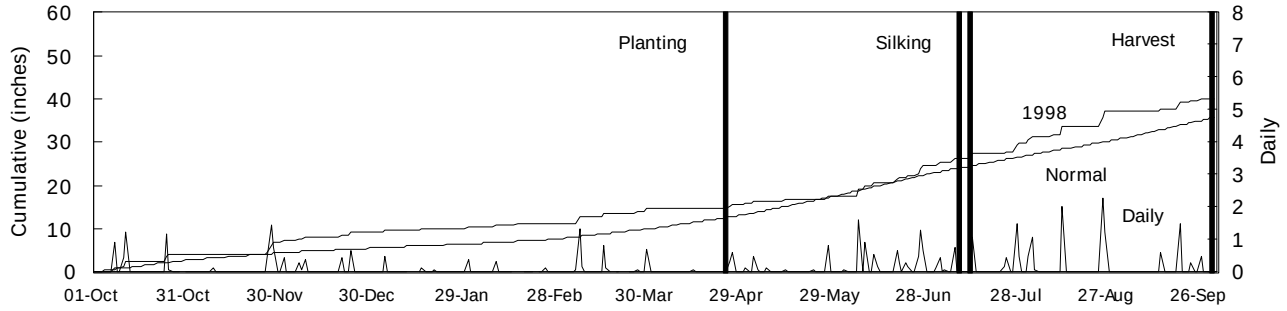
CV (%): 8

SILK DATES: 7/9/98 - 7/12/98

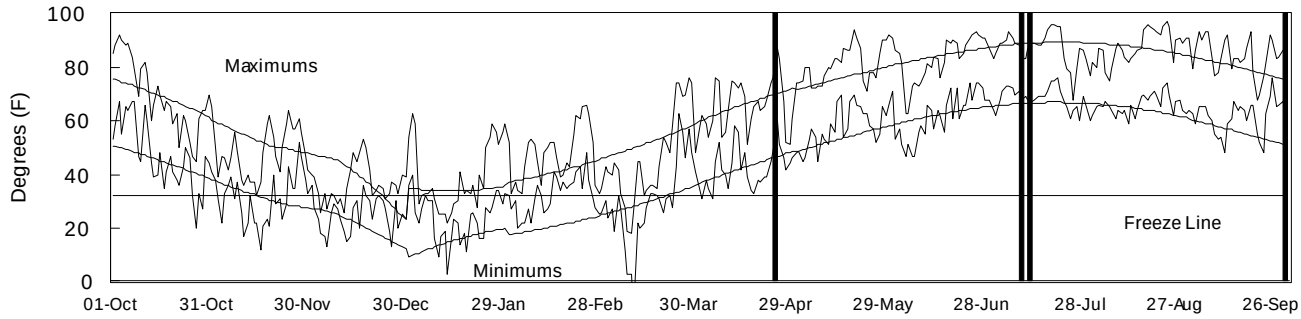
1998 GROWING CONDITONS:

Although the seedbed was somewhat uneven from knifing in the anhydrous ammonia fertilizer, emergence and stand establishment were excellent. Timely rains during most of the season set the stage for high yields. Dry conditions in August and early September caused rapid maturation and dry-down. Susceptible hybrids appeared to be infected with anthracnose.

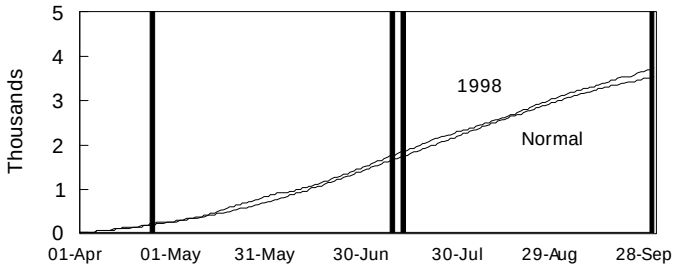
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1998	Normal	1998	Normal	1998	Normal
April	1.0	3.3	54	55	250	255
May	1.9	4.4	70	65	598	453
June	7.2	5.2	72	74	650	726
July	5.3	4.1	78	78	809	841
August	7.2	3.8	77	76	779	748
Sept.	2.9	4.9	73	68	657	532
Season Totals	25.5	25.7	71	69	3743	3555

TABLE 1. DONIPHAN CO. CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
CARGILL	6997	184	176	214	180	191	83	99	99	80	17	76	15	113	--	59
TERRA	E1128IT	162	--	--	--	--	73	--	--	--	--	76	17	102	--	59
MATURITY CHECK	SHORT - C4111	160	170	--	165	--	72	95	--	81	15	77	14	102	--	58
DEKALB	DK621	214	--	--	--	--	97	--	--	--	--	77	15	112	--	58
MATURITY CHECK	MID-H-2530	196	180	209	188	195	88	101	97	81	16	77	15	112	--	58
MYCOGEN	7250	219	179	219	199	206	99	101	102	81	17	77	16	115	--	59
RENZE	6368IP	197	--	--	--	--	89	--	--	--	--	77	16	116	--	61
AGRIPRO	AP 9597	208	--	--	--	--	94	--	--	--	--	78	15	110	--	61
AGRIPRO	AP 9656	196	--	--	--	--	89	--	--	--	--	78	15	107	--	59
AGRIPRO	AP 9565	208	--	--	--	--	94	--	--	--	--	78	15	119	--	59
ASGROW	RX730	211	--	--	--	--	96	--	--	--	--	78	15	109	--	59
ASGROW	RX760	201	189	217	195	203	91	106	101	81	16	78	15	112	--	56
DEKALB	DK658	247	--	--	--	--	112	--	--	--	--	78	15	121	--	60
DEKALB	DK626BtX	244	--	--	--	--	110	--	--	--	--	78	15	110	--	59
DEKALB	DK595BtX	199	--	--	--	--	90	--	--	--	--	78	15	104	--	59
FONTANELLE	5306	204	--	--	--	--	92	--	--	--	--	78	15	113	--	59
GARST	8366	223	188	--	205	--	101	105	--	82	17	78	15	110	--	58
GOLDEN HARVEST	H-2547	196	179	--	188	--	89	100	--	82	17	78	15	118	--	59
HOEGEMEYER	2666	206	--	--	--	--	93	--	--	--	--	78	15	117	--	59
LEWIS	5808	224	--	--	--	--	101	--	--	--	--	78	15	106	--	57
LEWIS	4137	224	--	--	--	--	101	--	--	--	--	78	15	107	--	61
MYCOGEN	2725	219	184	--	202	--	99	103	--	81	17	78	15	117	--	60
NC+	4880	220	--	--	--	--	99	--	--	--	--	78	15	116	--	59
PFISTER	2680	211	189	--	200	--	95	106	--	82	16	78	15	117	--	59
PSA	7727	223	--	--	--	--	101	--	--	--	--	78	15	115	--	59
RENZE	6386	219	186	221	203	209	99	104	103	82	16	78	15	115	--	59
RENZE	6337	230	--	--	--	--	104	--	--	--	--	78	15	121	--	59
RENZE	6345	190	186	220	188	199	86	104	102	81	16	78	15	103	--	59
RENZE	6349	220	--	--	--	--	100	--	--	--	--	78	15	119	--	57
TERRA	E1148	239	--	--	--	--	108	--	--	--	--	78	15	116	--	59
ASGROW	RX826	214	--	--	--	--	97	--	--	--	--	78	16	109	--	59
CARGILL	7770	242	170	--	206	--	109	96	--	81	17	78	16	114	--	59
FONTANELLE	5335	216	180	221	198	205	98	101	102	81	17	78	16	105	--	59
FONTANELLE	5627	219	--	--	--	--	99	--	--	--	--	78	16	115	--	59
FREEDOM	5555	236	--	--	--	--	107	--	--	--	--	78	16	107	--	58
GARST	8464	203	--	--	--	--	92	--	--	--	--	78	16	104	--	59
GARST	8342	210	--	204	--	--	95	--	95	--	--	78	16	116	--	58
GOLDEN HARVEST	H-2581	207	179	--	193	--	93	100	--	82	17	78	16	119	--	58
HAWKEYE	SX62	215	188	225	202	209	97	105	105	82	17	78	16	116	--	59
HAWKEYE	SX76	216	--	--	--	--	98	--	--	--	--	78	16	112	--	59
HAWKEYE	SX81	245	161	229	203	212	111	90	106	82	18	78	16	112	--	58
HOEGEMEYER	2682	240	175	233	208	216	109	98	108	82	18	78	16	116	--	58
HOEGEMEYER	2693	214	193	222	204	210	97	108	103	82	17	78	16	114	--	59
LEWIS	8268	249	--	--	--	--	113	--	--	--	--	78	16	114	--	59
MIDLAND	774	232	--	--	--	--	105	--	--	--	--	78	16	109	--	59
MSG (OHLDE)	G 8511	236	192	218	214	215	107	108	101	82	18	78	16	112	--	58
NK	N7639BT	224	--	--	--	--	101	--	--	--	--	78	16	116	--	61

(continued)

TABLE 1. DONIPHAN CO. CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
PFISTER	3049	228	174	237	201	213	103	98	110	82	18	78	16	113	--	57
PFISTER	2652	221	173	--	197	--	100	97	--	82	17	78	16	115	--	58
PIONEER	3237	238	194	--	216	--	107	109	--	81	17	78	16	114	--	60
PIONEER	33R87	233	--	--	--	--	105	--	--	--	--	78	16	115	--	61
PSA	7864	251	--	--	--	--	114	--	--	--	--	78	16	112	--	59
PSA	7855	213	--	--	--	--	96	--	--	--	--	78	16	116	--	60
RENZE	X7115 EXP	208	--	--	--	--	94	--	--	--	--	78	16	104	--	59
TERRA	E1178	246	--	--	--	--	111	--	--	--	--	78	16	115	--	59
TERRA	TR1157	240	--	--	--	--	109	--	--	--	--	78	16	115	--	58
CARGILL	8011	233	182	--	208	--	105	102	--	83	18	78	17	114	--	57
FREEDOM	5680	247	171	--	209	--	112	96	--	81	19	78	17	114	--	57
MATURITY CHECK	PIONEER 3162	203	157	--	180	--	92	88	--	81	18	78	17	111	--	61
MIDLAND	786	241	176	244	209	221	109	99	113	81	19	78	17	110	--	57
MSG (OHLDE)	G 8771	241	187	237	214	221	109	105	110	81	19	78	17	109	--	58
NC+	6959	229	--	--	--	--	103	--	--	--	--	78	17	120	--	58
NK	N79-L3	243	--	--	--	--	110	--	--	--	--	78	17	120	--	62
PFISTER	3977	237	--	--	--	--	107	--	--	--	--	78	17	115	--	59
PSA	4700Bt	254	--	--	--	--	115	--	--	--	--	78	17	120	--	60
RENZE	8418BT	238	--	--	--	--	108	--	--	--	--	78	17	121	--	60
TERRA	TR1188	230	--	--	--	--	104	--	--	--	--	78	17	119	--	60
CARGILL	8412	217	--	--	--	--	98	--	--	--	--	78	18	103	--	59
MYCOGEN	2888	211	--	--	--	--	96	--	--	--	--	78	18	112	--	60
MSG (OHLDE)	G 7711	181	192	211	187	195	82	108	98	82	17	79	15	115	--	59
LEWIS	5446	227	191	246	209	222	103	107	114	83	17	79	16	109	--	58
NC+	5445	240	190	--	215	--	108	107	--	82	17	79	16	120	--	58
PIONEER	32K61	238	198	--	218	--	108	111	--	82	17	79	16	116	--	62
TERRA	E1158IT	224	--	--	--	--	101	--	--	--	--	79	16	116	--	59
ASGROW	RX813	228	180	--	204	--	103	101	--	83	18	79	17	119	--	59
FONTANELLE	5786	222	178	--	200	--	100	100	--	83	18	79	17	115	--	59
WILSON	2330	239	177	212	208	209	108	100	98	83	21	79	18	116	--	57
WILSON	2335	236	184	225	210	215	107	103	104	83	22	79	19	110	--	58
WILSON	E975307	217	--	--	--	--	98	--	--	--	--	79	19	112	--	57
AVERAGES		221	178	216	200	205	221	178	216	82	18	78	16	113	--	59
CV(%)		8	9	7	--	--	8	9	7	--	--	1	2	6	--	1
LSD(0.05)**		19	19	18	--	--	9	11	8	--	--	1	1	8	--	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

1997CROP: Soybeans

1996 CROP: Corn

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

PLANTING DATE: 4/23/98

HARVEST DATE: 9/17/98

COOPERATORS:

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

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

STAND (% of target): 116

YIELD: Average (bu/a): 160

Range (bu/a): 123 - 186

LSD (bu/a): 13

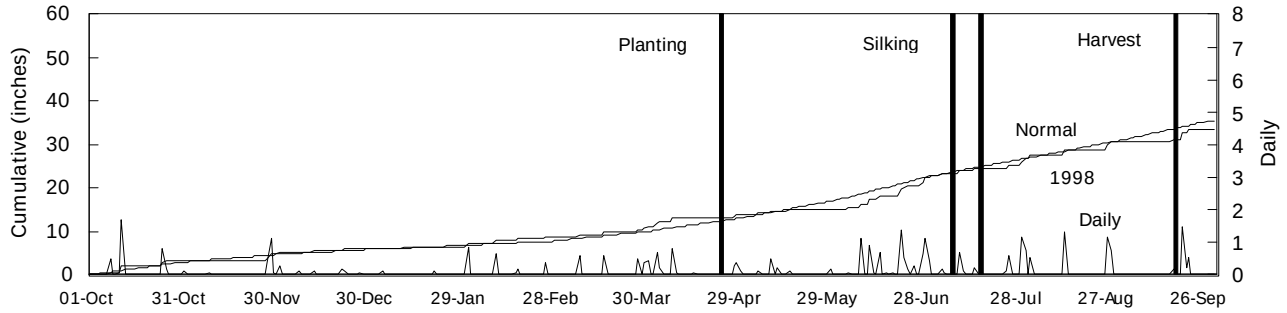
CV (%): 7

SILK DATES: 7/7/98 - 7/16/98

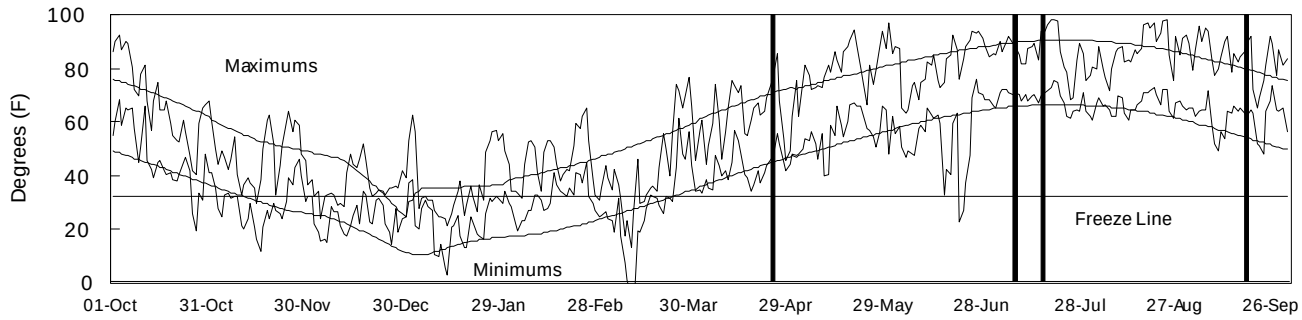
1998 GROWING CONDITONS:

Cool soils at planting did not seem to adversely affect emergence and stand establishment. Hot, dry conditions in May/June and again in August/September hastened maturity. Anthracnose may have affected susceptible hybrids.

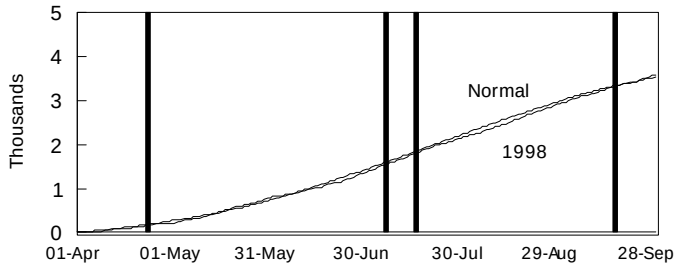
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	2.8	3.2	53	55	222	274
May	1.2	4.0	69	65	555	450
June	7.8	5.6	68	74	595	722
July	4.0	4.1	77	78	826	834
August	3.9	4.0	77	76	762	745
Sept.	2.6	4.7	73	68	653	531
Season Totals	22.3	25.6	70	69	3613	3555

TABLE 2. BROWN CO. CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	123	109	--	116	--	77	88	--	73	14	75	14	119	0	50
MSG (OHLDE)	G 7636	148	--	--	--	--	92	--	--	--	--	75	17	118	0	55
PFISTER	2680	138	135	--	137	--	86	110	--	74	17	75	17	112	0	55
PIONEER	34K77	152	--	--	--	--	95	--	--	--	--	75	17	119	0	57
GOLDEN HARVEST	H-2547	153	121	168	137	147	95	98	104	73	17	75	18	119	0	54
RENZE	6386	150	127	--	139	--	94	104	--	74	18	75	18	119	1	55
DEKALB	DK621	151	--	--	--	--	94	--	--	--	--	76	16	112	0	55
ASGROW	RX760	153	124	--	139	--	95	101	--	75	17	76	17	120	0	55
CARGILL	6997	124	--	--	--	--	77	--	--	--	--	76	17	114	0	53
DEKALB	DK626BtX	159	--	--	--	--	99	--	--	--	--	76	17	110	0	56
DEKALB	DK595BtX	158	--	--	--	--	98	--	--	--	--	76	17	112	0	57
RENZE	6345	144	122	--	133	--	90	100	--	74	17	76	17	116	0	55
TRIUMPH	1514	152	123	171	138	149	95	100	106	76	17	76	17	111	0	54
ASGROW	RX730	143	--	--	--	--	89	--	--	--	--	76	18	114	0	55
MIDLAND	764	144	--	--	--	--	90	--	--	--	--	76	18	114	0	53
MYCOGEN	7250	166	128	163	147	153	103	104	101	75	18	76	18	114	0	56
MYCOGEN	2725	151	117	--	134	--	94	95	--	74	18	76	18	122	0	55
PSA	7727	137	--	--	--	--	86	--	--	--	--	76	18	110	0	56
PSA	7855	170	--	--	--	--	106	--	--	--	--	76	19	119	0	56
PFISTER	3977	157	--	--	--	--	98	--	--	--	--	76	20	110	0	55
MATURITY CHECK	MID-H-2530	136	102	157	119	132	85	83	97	76	16	77	16	111	0	54
NC+	5018	175	--	--	--	--	109	--	--	--	--	77	17	115	0	57
ASGROW	RX826	148	--	--	--	--	93	--	--	--	--	77	18	110	0	55
LEWIS	4137	154	--	--	--	--	96	--	--	--	--	77	18	108	0	57
MSG (OHLDE)	G 7711	148	--	--	--	--	92	--	--	--	--	77	18	117	0	55
MSG (OHLDE)	G 8440	167	--	--	--	--	104	--	--	--	--	77	18	117	0	56
NK	N7639BT	161	--	--	--	--	100	--	--	--	--	77	18	120	0	56
RENZE	X7115 EXP	163	--	--	--	--	101	--	--	--	--	77	18	114	1	56
GARST	8342	153	122	--	137	--	95	99	--	75	18	77	19	117	0	54
HAWKEYE	SX76	160	--	--	--	--	99	--	--	--	--	77	19	123	0	57
MATURITY CHECK	PIONEER 3162	155	135	--	145	--	96	110	--	76	19	77	19	116	0	56
PFISTER	2652	165	134	--	149	--	103	109	--	76	17	78	17	114	0	57
FREEDOM	5555	176	--	--	--	--	109	--	--	--	--	78	18	117	0	58
NC+	5445	162	121	--	141	--	101	98	--	77	18	78	18	115	0	56
PFISTER	3049	168	122	159	145	150	105	100	99	77	18	78	18	124	0	57
ASGROW	RX813	172	124	--	148	--	107	101	--	77	19	78	19	119	0	56
CARGILL	7770	169	125	--	147	--	105	101	--	77	19	78	19	116	0	56
MSG (OHLDE)	G 8699	162	114	--	138	--	101	93	--	77	19	78	19	120	0	54
HAWKEYE	8989	183	--	--	--	--	114	--	--	--	--	78	20	122	0	60
NK	N79-L3	159	--	--	--	--	99	--	--	--	--	78	20	120	0	56

(continued)

TABLE 2. BROWN CO. CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
TRIUMPH	1866	174	--	--	--	--	108	--	--	--	--	78	20	119	1	58
FONTANELLE	5627	159	--	--	--	--	99	--	--	--	--	79	18	119	0	56
GOLDEN HARVEST	H-2581	160	124	176	142	153	100	101	109	78	18	79	18	120	0	55
LEWIS	5808	160	--	--	--	--	100	--	--	--	--	79	18	108	0	55
PIONEER	3237	162	147	--	155	--	101	120	--	78	18	79	18	112	0	57
RENZE	6349	152	--	--	--	--	94	--	--	--	--	79	18	122	0	54
LEWIS	8268	184	--	--	--	--	115	--	--	--	--	80	19	111	0	57
CARGILL	8412	186	--	--	--	--	116	--	--	--	--	80	20	113	0	60
MYCOGEN	2888	173	--	--	--	--	108	--	--	--	--	80	20	111	0	57
PSA	4700Bt	181	--	--	--	--	113	--	--	--	--	80	20	118	0	59
RENZE	8418BT	186	--	--	--	--	116	--	--	--	--	80	21	119	0	59
MIDLAND	786	174	129	--	152	--	109	105	--	79	19	81	19	114	0	56
PIONEER	32K61	166	145	--	155	--	103	118	--	80	18	82	18	121	0	59
HAWKEYE	SX81	170	136	182	153	163	106	110	113	80	20	82	19	117	0	59
NC+	7117	166	123	160	145	150	104	100	99	80	19	82	19	120	0	57
PSA	7864	170	--	--	--	--	106	--	--	--	--	82	19	113	0	56
MIDLAND	798	175	--	--	--	--	109	--	--	--	--	82	20	112	1	58
WILSON	2335	172	127	--	150	--	107	104	--	81	22	82	21	116	0	55
FREEDOM	5680	176	--	--	--	--	110	--	--	--	--	83	19	118	0	57
MIDLAND	709	154	--	--	--	--	96	--	--	--	--	83	19	118	0	56
WILSON	2330	180	126	--	153	--	112	102	--	81	20	83	20	112	0	56
WILSON	E975307	163	--	--	--	--	102	--	--	--	--	84	21	116	0	56
AVERAGES		160	123	162	142	148	160	123	162	77	18	78	18	116	0	56
CV(%)		7	9	9	--	--	7	9	9	--	--	2	3	4	303	3
LSD(0.05)**		13	12	13	--	--	8	10	8	--	--	2	1	6	NS	2

** 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

1997CROP: Wheat

1996 CROP: Fallow

FERTILIZER (lbs/acre): 150 N 30 P_2O_5 0 K_2O

PLANTING DATE: 4/24/98

HARVEST DATE: 9/14/98

COOPERATORS:

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

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

STAND (% of target): 115

YIELD: Average (bu/a): 143

Range (bu/a): 107 - 165

LSD (bu/a): 15

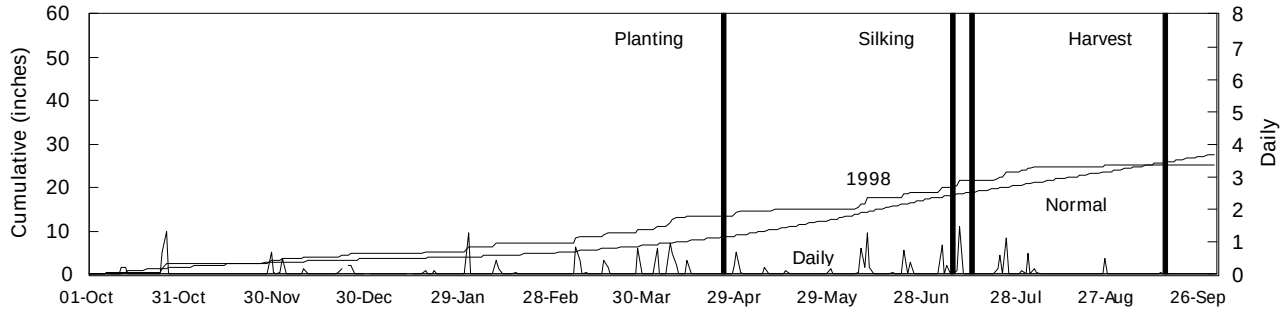
CV (%): 9

SILK DATES: 7/7/98 - 7/13/98

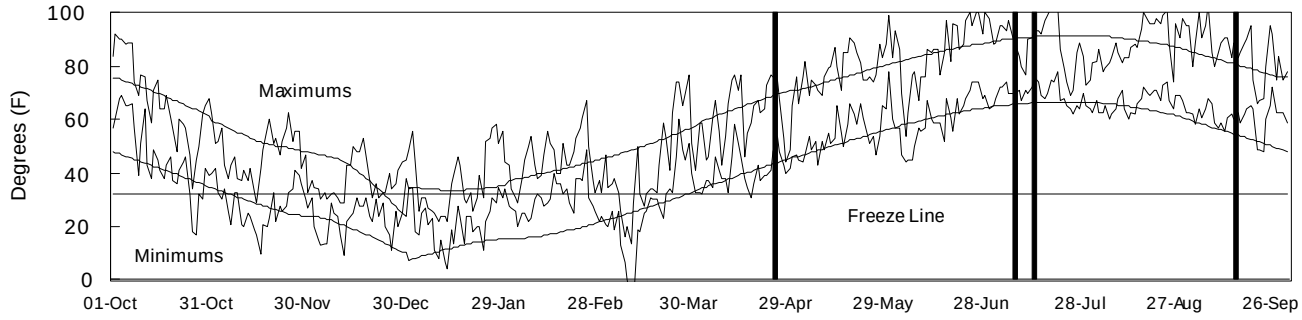
1998 GROWING CONDITONS:

The test started with good stands, but dry conditions in May slowed early growth. Good rainfall after the first week in June and through July allowed good mid-season growth and development. Hot, dry conditions in late summer speeded grain fill and dried the grain rapidly. Earworm populations were greater than normal. Corn borers were noted later in the season but caused no lodging or ear droppage.

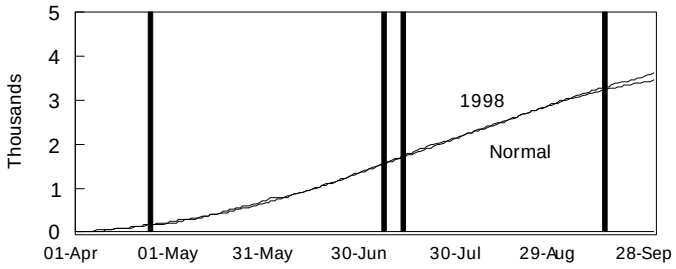
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	4.2	2.4	52	53	211	242
May	0.7	3.7	68	64	526	427
June	3.9	4.8	73	74	661	718
July	5.5	3.3	78	79	833	835
August	0.7	3.3	78	77	762	748
Sept.	0.1	3.5	73	67	641	518
Season Totals	15.1	20.9	70	69	3632	3487

TABLE 3. REPUBLIC CO. DRYLAND CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
PIONEER	34K77	142	103	--	122	--	99	143	--	80	16	74	15	114	2	58
MATURITY CHECK	PIONEER 3162	136	59	--	98	--	95	82	--	82	19	74	17	117	0	58
MATURITY CHECK	SHORT - C4111	135	61	--	98	--	94	85	--	82	14	75	13	116	0	59
DEKALB	DK569	132	109	--	121	--	92	152	--	81	16	75	14	114	2	58
MYCOGEN	2722	149	--	--	--	--	104	--	--	--	--	75	16	111	1	57
MATURITY CHECK	MID-H-2530	135	67	153	101	119	94	94	100	81	16	76	14	117	0	57
CARGILL	6997	107	--	--	--	--	75	--	--	--	--	76	15	116	1	58
PIONEER	35A19	122	--	--	--	--	85	--	--	--	--	76	15	113	0	59
PIONEER	35N05	161	--	--	--	--	112	--	--	--	--	76	15	113	0	59
GARST	8541IT	144	--	--	--	--	101	--	--	--	--	76	17	116	0	58
PSA	7727	151	--	--	--	--	105	--	--	--	--	76	17	113	0	57
CARGILL	6888	146	--	--	--	--	102	--	--	--	--	77	15	113	0	58
DEKALB	DK595BtX	138	--	--	--	--	96	--	--	--	--	77	15	115	0	58
MIDLAND	764	157	--	--	--	--	109	--	--	--	--	77	16	117	0	58
PFISTER	2680	143	64	--	104	--	100	90	--	84	18	77	16	114	2	58
GARST	8342	145	--	--	--	--	101	--	--	--	--	77	17	114	1	57
NK	N7639BT	159	--	--	--	--	111	--	--	--	--	77	17	114	1	58
TRIUMPH	1141	145	--	--	--	--	101	--	--	--	--	77	17	116	2	58
NK	N79-L3	142	--	--	--	--	99	--	--	--	--	77	19	115	0	57
PFISTER	3049	134	39	--	87	--	94	54	--	85	19	78	17	114	0	56
MILLER PREF.	MP-1155	135	--	--	--	--	94	--	--	--	--	78	18	117	1	57
CARGILL	7770	157	103	--	130	--	109	144	--	84	20	78	19	110	1	56
PFISTER	3977	151	--	--	--	--	105	--	--	--	--	78	19	115	2	56
PSA	7855	115	--	--	--	--	80	--	--	--	--	78	20	114	1	56
FREEDOM	5555	147	--	--	--	--	102	--	--	--	--	79	17	115	1	56
NC+	5018	164	--	--	--	--	114	--	--	--	--	79	17	115	1	57
NC+	5445	159	69	--	114	--	111	96	--	85	19	79	17	116	1	57
PFISTER	2652	131	76	--	103	--	91	105	--	85	18	79	17	115	0	56
FONTANELLE	5627	126	--	--	--	--	88	--	--	--	--	79	18	113	2	56
PSA	7864	136	--	--	--	--	95	--	--	--	--	79	19	114	2	56
FREEDOM	5680	155	--	--	--	--	108	--	--	--	--	79	20	113	0	55
MIDLAND	709	165	--	--	--	--	115	--	--	--	--	79	20	113	1	56
PSA	4700Bt	141	--	--	--	--	98	--	--	--	--	79	20	116	1	56
CARGILL	8412	150	--	--	--	--	104	--	--	--	--	80	20	117	0	56
MIDLAND	798	156	--	--	--	--	109	--	--	--	--	80	20	115	1	57
MIDLAND	786	155	67	--	111	--	108	93	--	86	21	80	21	114	1	55
AVERAGES		143	72	154	108	123	146	72	154	83	18	77	17	115	1	57
CV(%)		9	14	6	--	--	9	14	6	--	--	1	7	3	165	1
LSD(0.05)**		15	12	10	--	--	11	16	7	--	--	1	1	3	1	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 SILT LOAM SOIL

COUNTY: RILEY

LOCATION: Agronomy North Farm near Manhattan

TEST SITE: Reading silt loam

1997CROP: Soybeans

1996 CROP: Corn

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

PLANTING DATE: 4/17/98

HARVEST DATE: 9/14/98

COOPERATORS:

Kraig Roozeboom, agronomist; Karl Mannschreck, superintendent

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

STAND (% of target): 107

YIELD: Average (bu/a): 129

Range (bu/a): 100 - 148

LSD (bu/a): 13

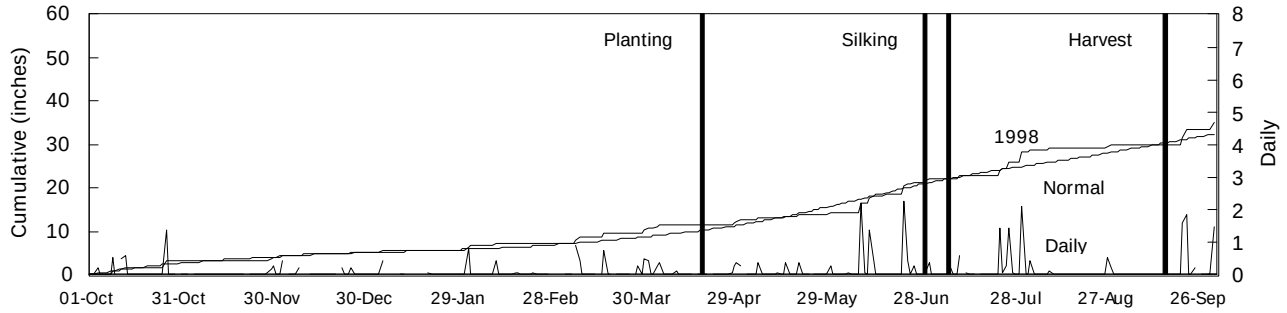
CV (%): 9

SILK DATES: 6/28/98 - 7/6/98

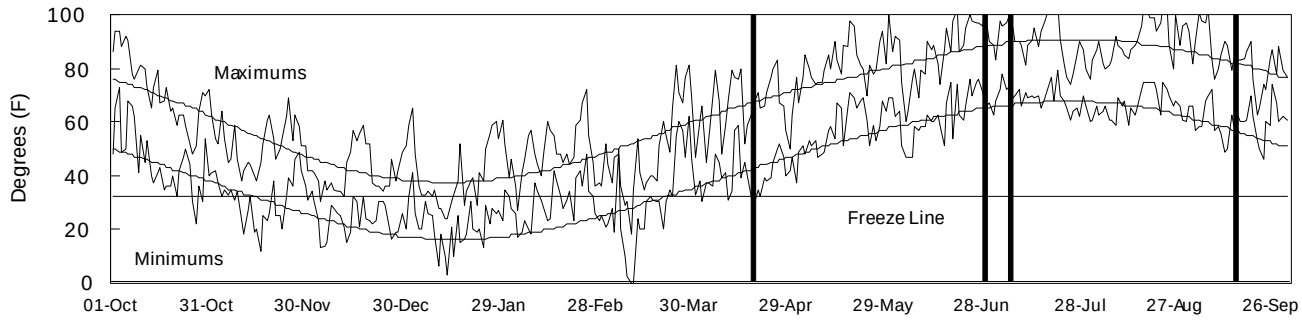
1998 GROWING CONDITONS:

Good seeding conditions resulted in generally good stands. Hot, dry weather in May and early June caused significant stress prior to silking. Most hybrids reached only 6 to 7 feet in height by tassel. Hail and wind in late June shredded leaves. Good rainfall in July helped yield potential, but hot, dry conditions in August and September caused rapid maturation and dry-down.

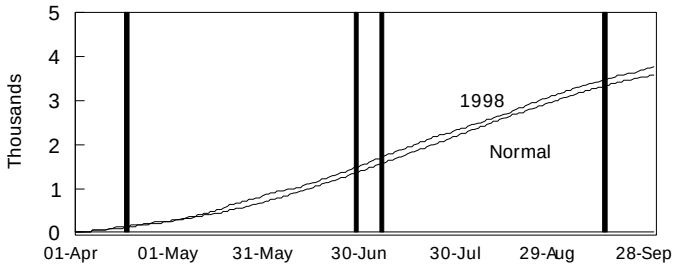
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	1.9	2.8	54	54	268	259
May	1.6	4.5	71	65	597	447
June	7.7	5.3	75	74	690	723
July	6.5	3.8	79	79	843	853
August	1.4	3.4	79	77	780	768
Sept.	5.3	3.8	72	69	623	567
Season Totals	24.4	23.5	72	70	3800	3615

TABLE 4. RILEY CO. CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	102	133	--	117	--	79	93	--	75	16	72	13	90	7	58
TERRA	E1128IT	105	--	--	--	--	81	--	--	--	--	72	14	102	4	58
DEKALB	DK595BtX	121	--	--	--	--	94	--	--	--	--	73	13	99	0	57
DEKALB	DK621	126	--	--	--	--	98	--	--	--	--	73	14	104	0	58
MSG (OHLDE)	G 7636	117	--	--	--	--	91	--	--	--	--	74	13	106	2	57
CARGILL	6997	100	--	--	--	--	78	--	--	--	--	74	14	108	0	57
MIDLAND	764	136	--	--	--	--	105	--	--	--	--	74	14	111	2	57
MYCOGEN	7250	125	153	--	139	--	97	107	--	76	19	74	14	107	3	58
NK	N7639BT	134	--	--	--	--	104	--	--	--	--	74	14	112	1	62
GARST	8342	123	--	--	--	--	95	--	--	--	--	74	15	110	0	58
MSG (OHLDE)	G 7711	129	--	--	--	--	100	--	--	--	--	74	15	108	1	58
AGRIPRO	AP 9565	132	--	--	--	--	102	--	--	--	--	75	14	109	1	58
NK	N79-L3	136	--	--	--	--	105	--	--	--	--	75	14	112	1	62
PFISTER	2680	124	134	--	129	--	96	94	--	77	19	75	14	109	0	58
PSA	7727	124	--	--	--	--	96	--	--	--	--	75	14	109	0	58
PSA	7855	127	--	--	--	--	98	--	--	--	--	75	14	110	2	58
MATURITY CHECK	PIONEER 3162	134	137	--	136	--	104	96	--	78	21	75	16	113	2	60
MATURITY CHECK	MID-H-2530	120	120	147	120	129	93	84	96	78	16	76	13	105	1	59
CARGILL	6888	128	--	--	--	--	99	--	--	--	--	76	14	112	0	57
PFISTER	2652	142	141	--	141	--	110	98	--	78	19	76	14	107	0	58
CARGILL	7770	124	153	--	139	--	96	107	--	78	19	76	15	108	0	59
NC+	5445	148	145	--	147	--	115	101	--	78	20	76	15	110	2	58
PSA	4700Bt	129	--	--	--	--	100	--	--	--	--	76	15	108	0	59
NC+	5018	145	--	--	--	--	112	--	--	--	--	77	13	108	1	59
FREEDOM	5555	126	137	--	131	--	98	95	--	79	18	77	14	105	3	58
MSG (OHLDE)	G 8440	143	--	--	--	--	110	--	--	--	--	77	14	102	1	58
FONTANELLE	5627	137	--	--	--	--	106	--	--	--	--	77	15	111	2	59
MSG (OHLDE)	G 8699	143	--	--	--	--	110	--	--	--	--	77	15	113	0	60
PFISTER	3977	146	--	--	--	--	113	--	--	--	--	77	17	111	1	58
TERRA	E1148	125	--	--	--	--	97	--	--	--	--	78	14	110	2	60
MIDLAND	798	127	--	--	--	--	98	--	--	--	--	78	15	101	0	60
PSA	7864	142	--	--	--	--	110	--	--	--	--	78	15	109	1	60
TERRA	E1178	138	--	--	--	--	107	--	--	--	--	78	15	106	1	59
TERRA	E1158IT	135	--	--	--	--	104	--	--	--	--	78	15	105	0	59
TERRA	TR1188	118	--	--	--	--	92	--	--	--	--	78	16	103	1	59
MIDLAND	786	130	--	151	--	--	101	--	99	--	--	79	15	104	1	58
PFISTER	3049	134	148	--	141	--	104	104	--	80	20	79	15	109	0	58
TERRA	TR1157	133	--	--	--	--	103	--	--	--	--	79	15	107	0	59
FREEDOM	5680	127	160	--	143	--	98	112	--	81	21	80	15	105	1	58
MIDLAND	709	122	--	--	--	--	95	--	--	--	--	80	15	111	1	59
AGRIPRO	AP 9843	140	164	--	152	--	108	114	--	81	20	80	16	108	1	59
CARGILL	8412	124	--	--	--	--	96	--	--	--	--	80	16	105	3	59
AVERAGES		129	143	152	136	142	129	143	152	78	19	76	14	107	1	59
CV(%)		9	7	7	--	--	9	7	8	--	--	1	2	6	148	1
LSD(0.05)**		13	11	NS	--	--	10	8	NS	--	--	1	1	NS	NS	1

** 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, 1996-1998.

			1998 YIELD AS % OF TEST AVERAGE[1]					1996-1998		
	BRAND	NAME	DON	BRO	RED	RIL	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
	FREEDOM	5680	112	110	108	98	107	22.03*	6.91	6
	HAWKEYE	SX81	111	106	--	--	--	20.26*	6.3	6
	CARGILL	7770	109	105	109	96	105	19.63*	5.57	8
	NC+	5445	108	101	111	115	109	18.5*	3.82	8
	MIDLAND	786	109	109	108	101	107	16.84*	4.76	9
	ASGROW	RX813	103	107	--	--	--	12.81	5.43	6
	PFISTER	2652	100	103	91	110	101	11.97*	2.85	8
	MYCOGEN	7250	99	103	--	97	--	11.92*	3.08	8
	RENZE	6386	99	94	--	--	--	10.82*	2.23	7
	ASGROW	RX760	91	95	--	--	--	10.56*	2.38	7
	PFISTER	3049	103	105	94	104	101	8.86	4.88	10
	GOLDEN HARVEST	H-2581	93	100	--	--	--	8.22*	1.9	7
	PFISTER	2680	95	86	100	96	94	6.7	3.09	8
	RENZE	6345	86	90	--	--	--	5.4	3.39	7
c	MATURITY CHECK	PIONEER 3162	92	96	95	104	97	3.81	2.85	8
	GARST	8342	95	95	101	95	97	3.54	2.51	6
c	MATURITY CHECK	MID-H-2530	88	85	94	93	90	-2.81	2.01	12
	MATURITY CHECK	SHORT - C4111	72	77	94	79	81	-11.56	5.18	8
	CARGILL	6997	83	77	75	78	78	-13.45	5.81	6
	AGRIPRO	AP 9565	94	--	--	102	--	--	--	--
	AGRIPRO	AP 9597	94	--	--	--	--	--	--	--
	AGRIPRO	AP 9656	89	--	--	--	--	--	--	--
	AGRIPRO	AP 9843	--	--	--	108	--	--	--	--
	ASGROW	RX730	96	89	--	--	--	--	--	--
	ASGROW	RX826	97	93	--	--	--	--	--	--
	CARGILL	6888	--	--	102	99	--	--	--	--
	CARGILL	8011	105	--	--	--	--	--	--	--
	CARGILL	8412	98	116	104	96	104	--	--	--
	DEKALB	DK569	--	--	92	--	--	--	--	--
	DEKALB	DK595BtX	90	98	96	94	95	--	--	--
	DEKALB	DK621	97	94	--	98	--	--	--	--
	DEKALB	DK626BtX	110	99	--	--	--	--	--	--
	DEKALB	DK658	112	--	--	--	--	--	--	--
	FONTANELLE	5306	92	--	--	--	--	--	--	--
	FONTANELLE	5335	98	--	--	--	--	--	--	--
	FONTANELLE	5627	99	99	88	106	98	--	--	--
	FONTANELLE	5786	100	--	--	--	--	--	--	--
	FREEDOM	5555	107	109	102	98	104	--	--	--
	GARST	8366	101	--	--	--	--	--	--	--
	GARST	8464	92	--	--	--	--	--	--	--
	GARST	8541IT	--	--	101	--	--	--	--	--
	GOLDEN HARVEST	H-2547	89	95	--	--	--	--	--	--
	HAWKEYE	8989	--	114	--	--	--	--	--	--
	HAWKEYE	SX62	97	--	--	--	--	--	--	--
	HAWKEYE	SX76	98	99	--	--	--	--	--	--
	HOEGEMEYER	2666	93	--	--	--	--	--	--	--
	HOEGEMEYER	2682	109	--	--	--	--	--	--	--
	HOEGEMEYER	2693	97	--	--	--	--	--	--	--
	LEWIS	4137	101	96	--	--	--	--	--	--
	LEWIS	5446	103	--	--	--	--	--	--	--
	LEWIS	5808	101	100	--	--	--	--	--	--
	LEWIS	8268	113	115	--	--	--	--	--	--
	MIDLAND	764	--	90	109	105	--	--	--	--
	MIDLAND	774	105	--	--	--	--	--	--	--
	MIDLAND	709	--	96	115	95	--	--	--	--

(continued)

TABLE 5. NORTHEASTERN KANSAS CORN TEST YIELD SUMMARY, 1996-1998.

BRAND	NAME	1998 YIELD AS % OF TEST AVERAGE[1] DON	BRO	RED	RIL	AVG.	1996-1998 DYA (bu/a)[2]	S.E.[3]	N[4]
MIDLAND	798	--	109	109	98	--	--	--	--
MILLER PREF.	MP-1155	--	--	94	--	--	--	--	--
MSG (OHLDE)	G 7636	--	92	--	91	--	--	--	--
MSG (OHLDE)	G 7711	82	92	--	100	--	--	--	--
MSG (OHLDE)	G 8440	--	104	--	110	--	--	--	--
MSG (OHLDE)	G 8511	107	--	--	--	--	--	--	--
MSG (OHLDE)	G 8699	--	101	--	110	--	--	--	--
MSG (OHLDE)	G 8771	109	--	--	--	--	--	--	--
MYCOGEN	2722	--	--	104	--	--	--	--	--
MYCOGEN	2725	99	94	--	--	--	--	--	--
MYCOGEN	2888	96	108	--	--	--	--	--	--
NC+	4880	99	--	--	--	--	--	--	--
NC+	5018	--	109	114	112	--	--	--	--
NC+	6959	103	--	--	--	--	--	--	--
NC+	7117	--	104	--	--	--	--	--	--
NK	N7639BT	101	100	111	104	104	--	--	--
NK	N79-L3	110	99	99	105	103	--	--	--
PFISTER	3977	107	98	105	113	106	--	--	--
PIONEER	3237	107	101	--	--	--	--	--	--
PIONEER	32K61	108	103	--	--	--	--	--	--
PIONEER	33R87	105	--	--	--	--	--	--	--
PIONEER	34K77	--	95	99	--	--	--	--	--
PIONEER	35A19	--	--	85	--	--	--	--	--
PIONEER	35N05	--	--	112	--	--	--	--	--
PSA	4700Bt	115	113	98	100	106	--	--	--
PSA	7727	101	86	105	96	97	--	--	--
PSA	7864	114	106	95	110	106	--	--	--
PSA	7855	96	106	80	98	95	--	--	--
RENZE	8418BT	108	116	--	--	--	--	--	--
RENZE	6337	104	--	--	--	--	--	--	--
RENZE	6349	100	94	--	--	--	--	--	--
RENZE	6368IP	89	--	--	--	--	--	--	--
RENZE	X7115 EXP	94	101	--	--	--	--	--	--
TERRA	E1128IT	73	--	--	81	--	--	--	--
TERRA	E1148	108	--	--	97	--	--	--	--
TERRA	E1158IT	101	--	--	104	--	--	--	--
TERRA	TR1188	104	--	--	92	--	--	--	--
TERRA	E1178	111	--	--	107	--	--	--	--
TERRA	TR1157	109	--	--	103	--	--	--	--
TRIUMPH	1141	--	--	101	--	--	--	--	--
TRIUMPH	1514	--	95	--	--	--	--	--	--
TRIUMPH	1866	--	108	--	--	--	--	--	--
WILSON	2330	108	112	--	--	--	--	--	--
WILSON	2335	107	107	--	--	--	--	--	--
WILSON	E975307	98	102	--	--	--	--	--	--
AVERAGES	(bushels/acre)	221	160	146	129	164	--	--	--
LSD(0.05)**		9	8	11	10	--	--	--	--

[1] DON = Doniphan Co. Test, Fuhrman Farms, Severance
BRO = Brown Co. Test, Cornbelt Exp. Field, Powhattan
RED = Republic Co. Dryland Test, North Central Exp. Field, Belleville
RIL = Riley Co. Test, Agronomy North Farm, Manhattan

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

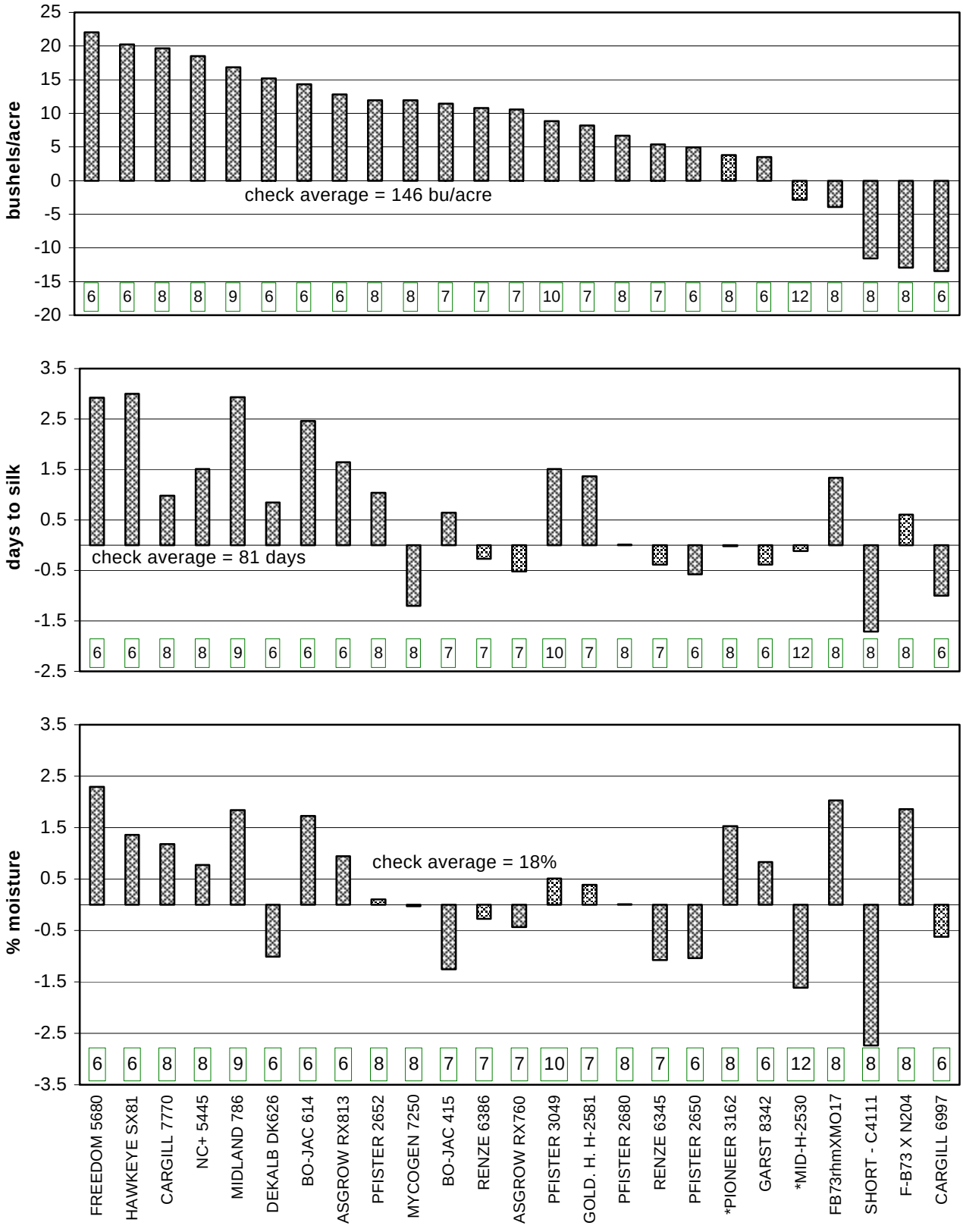
[3] SE = Standard Error of DYA; measure of consistency of yield differences.

[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; each hybrid 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, 1996-1998.



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

1997CROP: Corn

1996 CROP: Soybeans

FERTILIZER (lbs/acre): 187 N 40 P_2O_5 0 K_2O

PLANTING DATE: 4/24/98

HARVEST DATE: 9/23/98

COOPERATORS:

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

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

STAND (% of target): 100

YIELD: Average (bu/a): 151

Range (bu/a): 116 - 184

LSD (bu/a): 13

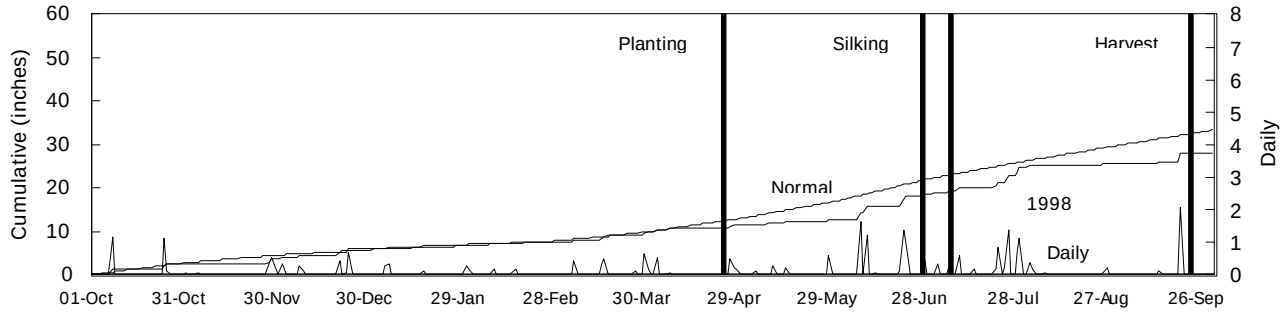
CV (%): 6

SILK DATES: 6/28/98 - 7/7/98

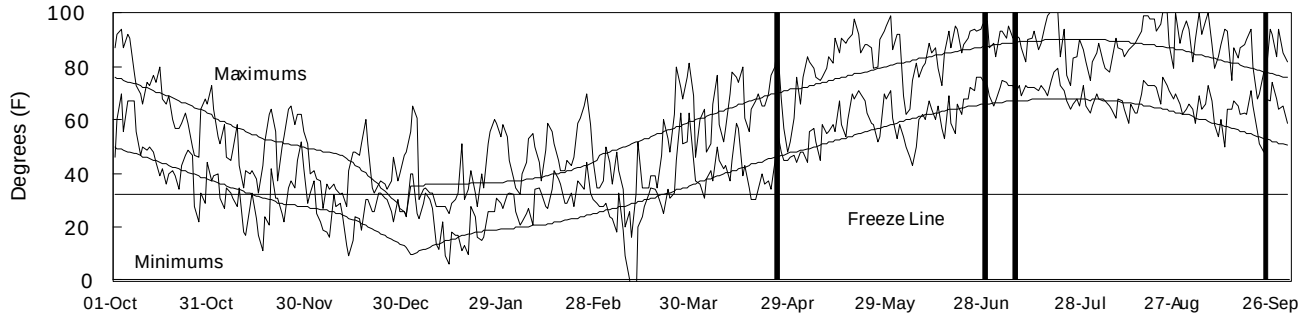
1998 GROWING CONDITONS:

Precipitation was below normal in April and May, near normal in June, and above normal in July. Corn matured earlier than normal. Lower than expected yields may have been related to decreased N availability because of excessive N loss during the season and lower initial N levels following the 1997 corn crop. No serious disease or insect problems were noted.

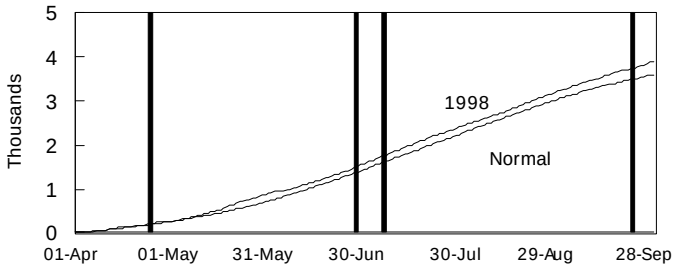
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1998	Normal	1998	Normal	1998	Normal
April	1.6	3.2	54	55	255	259
May	1.3	3.9	72	65	633	450
June	6.0	5.3	74	74	690	737
July	6.0	4.0	80	79	877	855
August	1.0	3.6	79	77	789	769
Sept.	2.3	3.4	75	68	689	550
Season Totals	18.1	23.4	72	70	3933	3620

TABLE 6. SHAWNEE CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
AGRIPRO	AP 9565	152	196	--	174	--	101	98	--	71	19	65	17	101	0	61
AGRIPRO	AP 9656	148	--	--	--	--	98	--	--	--	--	66	17	99	0	61
MATURITY CHECK	SHORT - C4111	116	170	--	143	--	77	85	--	71	15	67	16	99	1	60
MYCOGEN	2725	154	195	--	175	--	102	98	--	72	18	67	16	108	0	61
ASGROW	RX730	145	--	--	--	--	96	--	--	--	--	67	17	93	0	61
HOEGEMEYER	2666	146	--	--	--	--	97	--	--	--	--	67	17	104	0	62
PIONEER	33A14	170	--	--	--	--	113	--	--	--	--	67	17	100	0	61
GARST	8342	137	--	--	--	--	91	--	--	--	--	67	18	99	0	61
TERRA	E1128IT	126	--	--	--	--	84	--	--	--	--	67	18	102	0	61
DEKALB	DK621	154	--	--	--	--	102	--	--	--	--	69	16	94	0	61
GOLDEN HARVEST	H-2547	142	177	--	159	--	94	89	--	73	19	69	17	103	0	61
MIDLAND	764	157	--	--	--	--	105	--	--	--	--	69	17	100	0	61
RENZE	6386	143	--	--	--	--	95	--	--	--	--	69	17	100	0	61
NC+	5445	154	189	--	172	--	103	95	--	74	19	69	18	102	0	61
AGRIPRO	AP 9597	147	--	--	--	--	98	--	--	--	--	70	16	99	0	63
DEKALB	DK626BtX	157	--	--	--	--	104	--	--	--	--	70	16	96	0	61
HOEGEMEYER	2693	149	203	197	176	183	99	102	103	74	18	70	16	105	0	61
TERRA	E1158IT	157	--	--	--	--	104	--	--	--	--	70	16	98	0	62
ASGROW	RX826	136	--	--	--	--	90	--	--	--	--	70	17	99	0	62
ASGROW	RX760	142	--	196	--	--	94	--	102	--	--	70	17	103	0	61
GARST	8366	144	185	--	165	--	96	93	--	75	19	70	17	98	0	60
MATURITY CHECK	PIONEER 3162	122	192	--	157	--	81	96	--	73	20	70	17	100	0	62
NK	N79-L3	165	--	--	--	--	110	--	--	--	--	70	17	102	0	64
RENZE	X7115 EXP	167	--	--	--	--	111	--	--	--	--	70	17	107	0	61
RENZE	6349	140	--	--	--	--	93	--	--	--	--	70	17	107	0	59
DEKALB	DK632	153	--	--	--	--	102	--	--	--	--	70	18	98	0	62
RENZE	8418BT	157	--	--	--	--	104	--	--	--	--	70	18	107	0	61
CARGILL	7770	140	199	195	170	178	93	100	101	75	19	71	17	104	0	61
MYCOGEN	2815	149	--	--	--	--	99	--	--	--	--	71	17	97	0	60
MIDLAND	786	154	242	--	198	--	102	121	--	77	20	72	17	86	0	59
NK	N7639BT	157	--	--	--	--	105	--	--	--	--	72	17	97	0	62
PIONEER	32K61	140	209	--	175	--	93	105	--	76	19	72	17	95	0	64
PIONEER	3237	164	188	171	176	174	109	94	89	77	20	72	17	105	0	62
GOLDEN HARVEST	H-2643IMI	161	--	--	--	--	107	--	--	--	--	72	18	93	0	63
TERRA	E1178	157	--	--	--	--	105	--	--	--	--	72	18	98	0	61
GARST	8222IT	184	--	--	--	--	122	--	--	--	--	72	19	103	0	63
MATURITY CHECK	MID-H-2530	124	164	177	144	155	82	82	92	75	17	73	16	99	0	60
TERRA	E1148	141	--	--	--	--	94	--	--	--	--	73	16	106	0	61
CARGILL	8011	171	208	--	189	--	113	104	--	76	19	73	17	102	0	60
GOLDEN HARVEST	H-2581	137	192	--	165	--	91	96	--	76	19	73	17	99	0	61
HOEGEMEYER	2682	151	199	184	175	178	100	100	96	77	19	73	17	107	0	60
ASGROW	RX813	134	192	--	163	--	89	96	--	76	20	73	18	105	0	61
CARGILL	8412	174	--	--	--	--	116	--	--	--	--	73	18	101	0	62
MIDLAND	798	155	--	--	--	--	103	--	--	--	--	73	18	88	0	61
MIDLAND	709	139	--	--	--	--	92	--	--	--	--	73	18	104	0	62
RENZE	6397	149	--	--	--	--	99	--	--	--	--	73	18	98	0	60
TERRA	TR1157	159	233	--	196	--	106	117	--	77	20	73	18	106	0	60
MYCOGEN	2888	178	--	--	--	--	118	--	--	--	--	73	19	97	1	63
TERRA	TR1188	162	--	--	--	--	107	--	--	--	--	73	19	98	0	61
NC+	6959	177	--	--	--	--	117	--	--	--	--	74	18	106	0	61
NC+	7117	140	212	--	176	--	93	107	--	78	21	74	18	102	0	61
AVERAGES		151	199	192	175	181	151	199	192	75	19	71	17	100	0	61
CV(%)		6	7	6	--	--	6	7	6	--	--	2	3	6	352	1
LSD(0.05)**		13	16	16	--	--	9	8	9	--	--	2	1	9	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, IRRIGATED

COUNTY: REPUBLIC

LOCATION: Irrigation Experiment Field, Scandia

TEST SITE: Crete silt loam

1997CROP: Soybeans

1996 CROP: Corn

FERTILIZER (lbs/acre): 200 N 30 P_2O_5 0 K_2O

PLANTING DATE: 4/21/98

HARVEST DATE: 9/25/98

COOPERATORS:

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

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

STAND (% of target): 121

YIELD: Average (bu/a): 175

Range (bu/a): 138 - 195

LSD (bu/a): 8

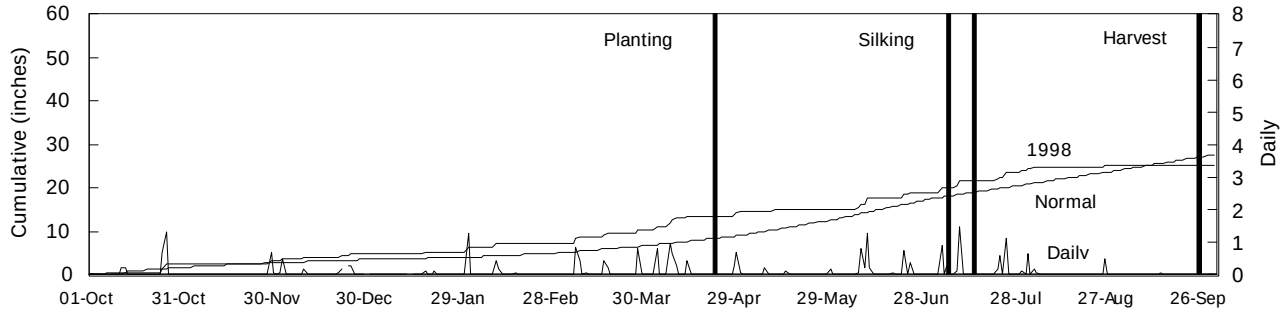
CV (%): 4

SILK DATES: 7/6/98 - 7/14/98

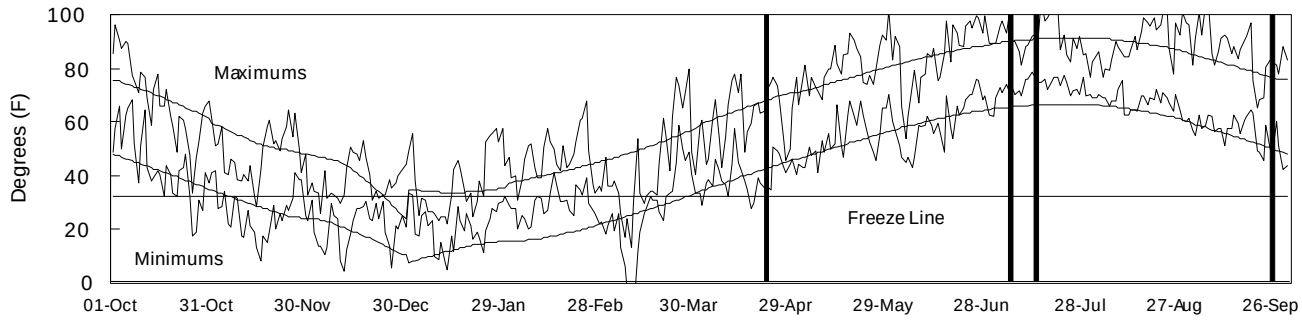
1998 GROWING CONDITONS:

Dry conditions soon after planting prevented crusting and enabled almost every seed to emerge and establish a plant. July and August were very warm. Extremely dry conditions accompanied the warm temperatures in August. Large numbers of earworms were observed. A few corn borers late in the season appeared to cause little damage, because no dropped ears were evident.

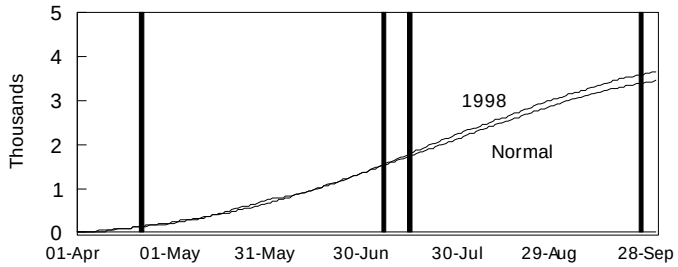
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	4.2	2.4	51	53	211	242
May	0.7	3.7	68	64	537	427
June	3.9	4.8	72	74	644	718
July	5.5	3.3	82	79	932	835
August	0.7	3.3	79	77	781	748
Sept.	0.1	3.5	71	67	590	518
Season Totals	15.1	20.9	71	69	3694	3487

TABLE 7. REPUBLIC CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	138	196	--	167	--	79	95	--	79	14	76	14	123	0	58
MATURITY CHECK	PIONEER 3162	158	196	--	177	--	90	95	--	80	15	76	16	120	0	58
NK	N7639BT	191	--	--	--	--	109	--	--	--	--	76	16	125	0	59
PIONEER	33A14	185	--	--	--	--	106	--	--	--	--	76	16	121	0	58
RENZE	6318	169	--	--	--	--	96	--	--	--	--	77	15	117	0	59
CARGILL	6997	142	212	--	177	--	81	103	--	80	15	78	15	124	0	58
DEKALB	DK595BtX	187	--	--	--	--	107	--	--	--	--	78	15	121	1	58
DEKALB	DK621	179	--	--	--	--	102	--	--	--	--	78	15	120	0	59
HAWKEYE	SX55	171	222	--	197	--	98	108	--	80	15	78	15	121	0	59
MSG (OHLDE)	G 7711	181	208	186	195	192	103	101	100	80	15	78	15	120	0	58
RENZE	6345	172	--	--	--	--	98	--	--	--	--	78	15	120	0	58
ASGROW	RX730	158	--	--	--	--	90	--	--	--	--	78	16	122	0	58
PIONEER	33R87	180	--	--	--	--	103	--	--	--	--	78	16	119	0	60
RENZE	6386	179	--	--	--	--	102	--	--	--	--	78	16	122	0	58
CARGILL	6888	166	--	--	--	--	95	--	--	--	--	79	15	123	0	58
GOLDEN HARVEST	H-2516	166	--	--	--	--	94	--	--	--	--	79	15	123	1	58
MATURITY CHECK	MID-H-2530	148	199	166	173	171	84	96	89	82	15	79	15	118	1	57
AGRIPRO	AP 9656	182	--	--	--	--	104	--	--	--	--	79	16	125	0	58
AGRIPRO	AP 9565	179	238	179	209	199	102	115	96	81	15	79	16	119	0	58
DEKALB	DK632	180	237	--	209	--	103	115	--	81	15	79	16	121	0	58
HOEGEMEYER	2666	176	--	--	--	--	101	--	--	--	--	79	16	127	0	58
HOEGEMEYER	2693	180	205	180	192	188	102	99	97	81	15	79	16	124	0	58
MIDLAND	764	170	--	--	--	--	97	--	--	--	--	79	16	123	0	58
MILLER PREF.	MP-1155	193	--	--	--	--	110	--	--	--	--	79	16	120	0	59
MILLER PREF.	MP-1123	162	225	183	193	190	92	109	99	81	15	79	16	124	0	59
GARST	8342	164	227	196	196	196	94	110	106	81	16	79	17	120	0	57
MYCOGEN	2725	176	220	--	198	--	100	106	--	81	16	79	17	124	0	57
NK	N79-L3	182	--	--	--	--	104	--	--	--	--	79	17	120	0	60
AGRIPRO	AP 9597	188	--	--	--	--	107	--	--	--	--	80	15	119	0	59
RENZE	6349	156	--	--	--	--	89	--	--	--	--	80	15	120	0	57
GARST	8366	160	223	--	191	--	91	108	--	82	15	80	16	119	0	58
RENZE	X7115 EXP	168	--	--	--	--	96	--	--	--	--	80	16	122	0	59
CARGILL	7770	187	227	192	207	202	107	110	104	82	16	80	17	125	0	58
HOEGEMEYER	683 IMI	150	--	--	--	--	85	--	--	--	--	80	17	117	0	57
NC+	5445	192	217	--	205	--	110	105	--	82	16	80	17	121	0	58
RENZE	6397	164	--	--	--	--	93	--	--	--	--	80	17	125	0	57
RENZE	8418BT	188	--	--	--	--	107	--	--	--	--	80	18	124	0	58
PIONEER	3237	184	201	201	193	196	105	97	108	83	15	81	15	124	0	59
MYCOGEN	2815	156	--	--	--	--	89	--	--	--	--	81	16	120	0	58
HOEGEMEYER	2682	159	189	179	174	176	91	91	96	83	16	81	17	121	0	57
ASGROW	RX799Bt	192	--	--	--	--	110	--	--	--	--	81	18	123	0	58
CARGILL	8011	174	205	--	190	--	99	99	--	84	15	82	16	123	0	57
MSG (OHLDE)	G 8771	182	213	185	198	193	104	103	99	84	16	82	17	116	0	56
ASGROW	XP8897	195	--	--	--	--	111	--	--	--	--	82	18	120	0	57
MIDLAND	798	193	--	--	--	--	110	--	--	--	--	82	18	112	0	57
WILSON	2330	188	--	--	--	--	107	--	--	--	--	82	19	118	0	57
MIDLAND	709	191	--	--	--	--	109	--	--	--	--	83	16	118	0	58
MYCOGEN	2888	188	--	--	--	--	107	--	--	--	--	83	17	121	0	58
NC+	7117	188	--	--	--	--	107	--	--	--	--	83	17	122	0	58
NC+	6959	191	190	--	191	--	109	92	--	85	16	83	18	118	0	56
MIDLAND	786	194	--	--	--	--	110	--	--	--	--	84	17	116	0	57
AVERAGES		175	207	186	191	189	175	207	186	82	15	80	16	121	0	58
CV(%)		4	7	5	--	--	4	7	5	--	--	1	4	4	235	1
LSD(0.05)**		8	17	12	--	--	5	8	6	--	--	1	1	5	NS	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, 1996-1998.

			1998 YIELD AS % OF TEST AVERAGE[1]			1996-1998		
	BRAND	NAME	SHI	REI	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
	MSG (OHLDE)	G 8771	--	104	--	27.82*	6.57	5
	CARGILL	8011	113	99	106	26.41*	7.24	4
	AGRIPRO	AP 9565	101	102	102	25.35*	4.24	5
	NC+	5445	103	110	106	25.24*	5.38	4
	MYCOGEN	2725	102	100	101	23.34*	2.44	4
	CARGILL	7770	93	107	100	22.66*	3.59	6
	GARST	8342	91	94	93	21.34*	4.29	4
	HOEGEMEYER	2693	99	102	101	18.11*	3.18	6
	PIONEER	3237	109	105	107	17.42	8.17	6
	GARST	8366	96	91	93	15.13*	4.18	4
	HOEGEMEYER	2682	100	91	96	9.28	5.23	6
c	MATURITY CHECK	PIONEER 3162	81	90	86	4.19	3.02	4
c	MATURITY CHECK	MID-H-2530	82	84	83	-4.58	2.32	6
	MATURITY CHECK	SHORT - C4111	77	79	78	-7.77	2.52	4
	AGRIPRO	AP 9597	98	107	103	--	--	--
	AGRIPRO	AP 9656	98	104	101	--	--	--
	ASGROW	RX730	96	90	93	--	--	--
	ASGROW	RX760	94	--	--	--	--	--
	ASGROW	RX799Bt	--	110	--	--	--	--
	ASGROW	RX813	89	--	--	--	--	--
	ASGROW	RX826	90	--	--	--	--	--
	ASGROW	XP8897	--	111	--	--	--	--
	CARGILL	6888	--	95	--	--	--	--
	CARGILL	6997	--	81	--	--	--	--
	CARGILL	8412	116	--	--	--	--	--
	DEKALB	DK595BtX	--	107	--	--	--	--
	DEKALB	DK621	102	102	102	--	--	--
	DEKALB	DK626BtX	104	--	--	--	--	--
	DEKALB	DK632	102	103	102	--	--	--
	GARST	8222IT	122	--	--	--	--	--
	GOLDEN HARVEST	H-2516	--	94	--	--	--	--
	GOLDEN HARVEST	H-2547	94	--	--	--	--	--
	GOLDEN HARVEST	H-2581	91	--	--	--	--	--
	GOLDEN HARVEST	H-2643IMI	107	--	--	--	--	--
	HAWKEYE	SX55	--	98	--	--	--	--
	HOEGEMEYER	2666	97	101	99	--	--	--
	HOEGEMEYER	683 IMI	--	85	--	--	--	--
	MIDLAND	764	105	97	101	--	--	--
	MIDLAND	786	102	110	106	--	--	--

(continued)

TABLE 8. NORTHEASTERN KANSAS IRRIGATED CORN TEST YIELD SUMMARY, 1996-1998.

		1998 YIELD AS % OF TEST AVERAGE[1]			1996-1998		
BRAND	NAME	SHI	REI	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
MIDLAND	709	92	109	101	--	--	--
MIDLAND	798	103	110	107	--	--	--
MILLER PREF.	MP-1123	--	92	--	--	--	--
MILLER PREF.	MP-1155	--	110	--	--	--	--
MSG (OHLDE)	G 7711	--	103	--	--	--	--
MYCOGEN	2815	99	89	94	--	--	--
MYCOGEN	2888	118	107	113	--	--	--
NC+	6959	117	109	113	--	--	--
NC+	7117	93	107	100	--	--	--
NK	N7639BT	105	109	107	--	--	--
NK	N79-L3	110	104	107	--	--	--
PIONEER	32K61	93	--	--	--	--	--
PIONEER	33A14	113	106	109	--	--	--
PIONEER	33R87	--	103	--	--	--	--
RENZE	8418BT	104	107	106	--	--	--
RENZE	6318	--	96	--	--	--	--
RENZE	6345	--	98	--	--	--	--
RENZE	6349	93	89	91	--	--	--
RENZE	6386	95	102	98	--	--	--
RENZE	6397	99	93	96	--	--	--
RENZE	X7115 EXP	111	96	103	--	--	--
TERRA	E1128IT	84	--	--	--	--	--
TERRA	E1148	94	--	--	--	--	--
TERRA	E1158IT	104	--	--	--	--	--
TERRA	TR1188	107	--	--	--	--	--
TERRA	E1178	105	--	--	--	--	--
TERRA	TR1157	106	--	--	--	--	--
WILSON	2330	--	107	--	--	--	--
AVERAGES	(bushels/acre)	151	175	163	--	--	--
LSD(0.05)**		9	5	--	--	--	--

1 SHI =Shawnee Co. Test, KS River Valley Exp. Field, Topeka REI = 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.

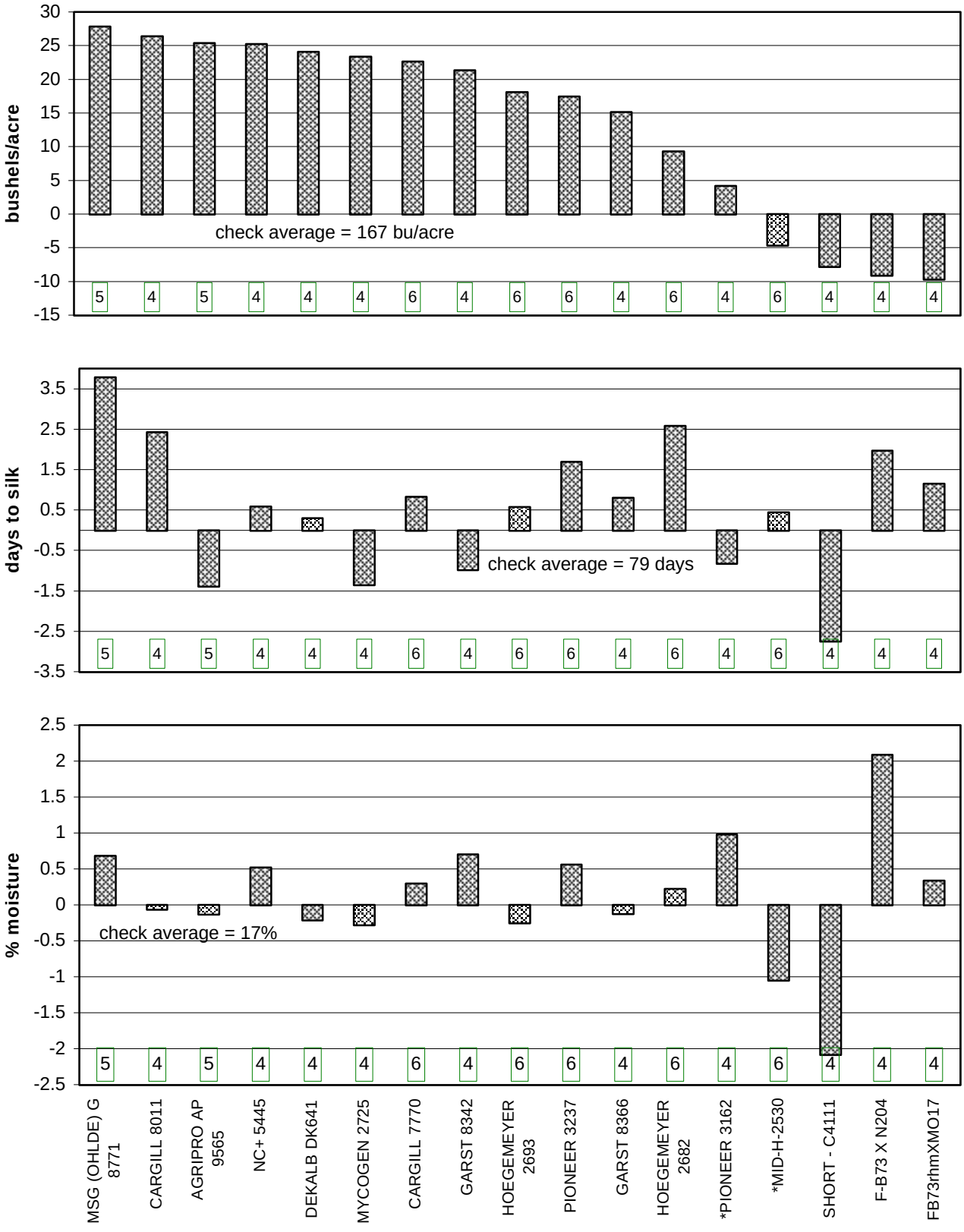
3 SE = Standard Error of DYA; measure of consistency of yield differences.

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; each hybrid 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, 1996-1998.



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: Dr. Dick Geis farm northwest of Topeka

TEST SITE: Reading silty clay loam

1997CROP: Wheat

1996 CROP: Wheat

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

PLANTING DATE: 4/14/98

HARVEST DATE: 9/10/98

COOPERATORS:

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

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

STAND (% of target): 108

YIELD: Average (bu/a): 159

Range (bu/a): 109 - 207

LSD (bu/a): 15

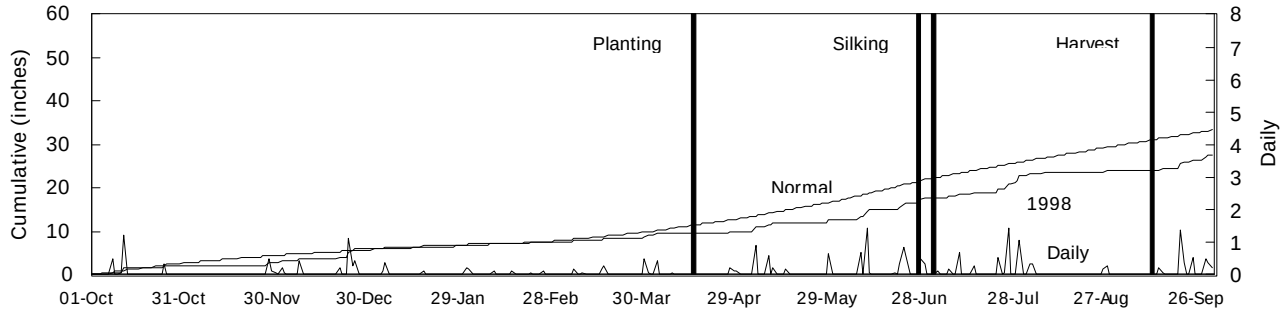
CV (%): 8

SILK DATES: 6/26/98 - 7/1/98

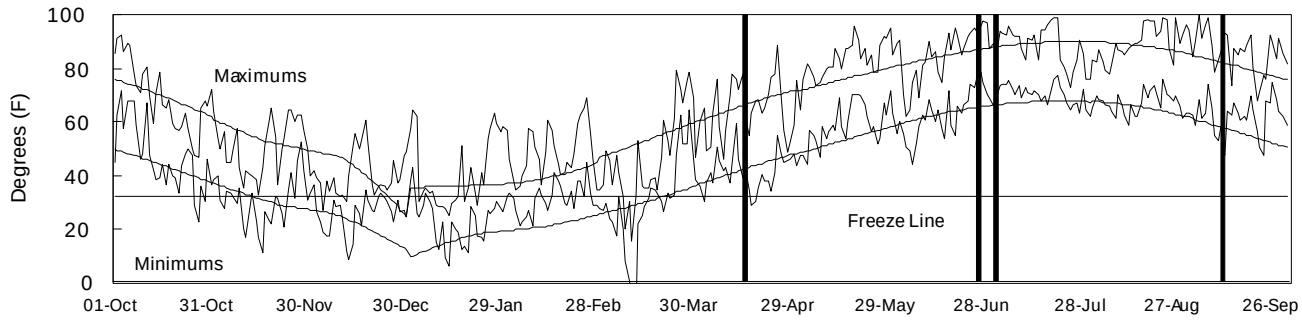
1998 GROWING CONDITONS:

Precipitation was below normal in April and May, near normal in June, and above normal in July. Corn matured earlier than usual. No serious disease or insect problems were noted.

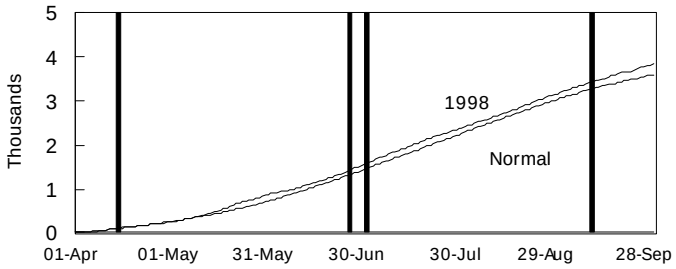
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	1.1	3.2	53	55	246	259
May	2.6	3.9	71	65	617	450
June	5.0	5.3	74	74	698	737
July	5.1	4.0	79	79	862	855
August	1.2	3.6	79	77	780	769
Sept.	3.7	3.4	74	68	679	550
Season Totals	18.7	23.4	72	70	3881	3620

TABLE 9. SHAWNEE CO. DRYLAND CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	109	61	--	85	--	69	69	--	74	15	73	14	111	6	62
PIONEER	34K77	161	--	--	--	--	101	--	--	--	--	73	16	114	0	61
DEKALB	DK621	141	--	--	--	--	88	--	--	--	--	73	17	97	0	59
NK	N7639BT	164	--	--	--	--	103	--	--	--	--	73	17	106	0	61
GARST	8342	145	--	--	--	--	91	--	--	--	--	73	19	111	0	59
NK	N79-L3	178	--	--	--	--	112	--	--	--	--	73	19	105	0	60
DEKALB	DK626BtX	153	--	--	--	--	96	--	--	--	--	74	15	100	0	61
MATURITY CHECK	MID-H-2530	147	71	141	109	119	92	80	86	76	15	74	15	104	2	60
NC+	5018	173	--	--	--	--	109	--	--	--	--	74	16	108	0	60
ASGROW	RX760	145	--	--	--	--	91	--	--	--	--	74	17	104	0	58
PIONEER	33R87	176	--	--	--	--	110	--	--	--	--	74	17	121	0	62
AGRIPRO	AP 9565	153	--	--	--	--	96	--	--	--	--	74	18	108	0	59
ASGROW	RX730	145	--	--	--	--	91	--	--	--	--	74	18	105	1	59
GOLDEN HARVEST	H-2547	144	--	--	--	--	91	--	--	--	--	74	18	107	0	59
MIDLAND	774	165	91	--	128	--	104	103	--	76	18	74	18	103	0	58
MIDLAND	747	168	--	--	--	--	106	--	--	--	--	74	18	109	0	58
MYCOGEN	2725	145	76	--	110	--	91	86	--	76	17	74	18	101	0	59
NC+	5445	169	94	--	131	--	106	106	--	76	19	74	18	110	0	58
PIONEER	33A14	174	--	--	--	--	110	--	--	--	--	74	18	114	0	59
ASGROW	RX826	130	--	--	--	--	82	--	--	--	--	74	19	95	1	59
ASGROW	RX813	168	94	--	131	--	105	106	--	77	20	74	19	108	0	58
GOLDEN HARVEST	H-2581	161	97	173	129	143	101	109	106	76	20	74	19	108	0	58
MATURITY CHECK	PIONEER 3162	161	78	--	120	--	101	89	--	76	19	74	19	106	1	60
NC+	6959	163	101	--	132	--	102	114	--	77	21	74	19	102	0	57
DELANGE	DS 1997	173	--	--	--	--	109	--	--	--	--	75	19	104	1	57
CARGILL	8412	207	--	--	--	--	130	--	--	--	--	75	21	121	0	57
DELANGE	DS 1995	144	94	--	119	--	91	106	--	79	23	78	20	108	0	58
MYCOGEN	2888	194	101	--	148	--	122	114	--	79	23	78	21	125	0	57
AVERAGES		159	89	163	124	137	159	89	163	76	19	74	18	108	0	59
CV(%)		8	9	7	--	--	8	9	7	--	--	2	5	8	327	2
LSD(0.05)**		15	10	14	--	--	9	11	9	--	--	1	1	11	2	1

** Unless two varieties differ by more than the L.S.D., 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

1997CROP: Soybeans

1996 CROP: Corn

FERTILIZER (lbs/acre): 100 N 34 P_2O_5 11 K_2O

PLANTING DATE: 5/8/98

HARVEST DATE: 10/26/98

COOPERATORS:

Keith Janssen; agronomist, Jim Kimball, technician

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

STAND (% of target): 86

YIELD: Average (bu/a): 137

Range (bu/a): 89 - 157

LSD (bu/a): 14

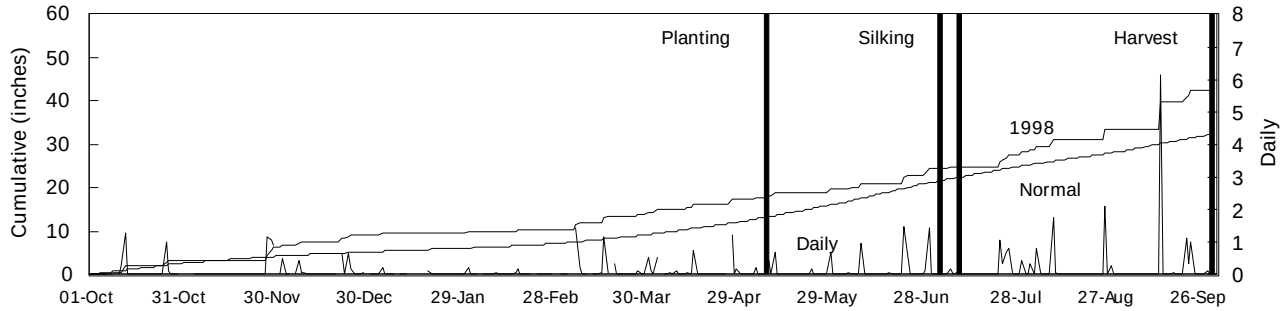
CV (%): 9

SILK DATES: 7/3/98 - 7/9/98

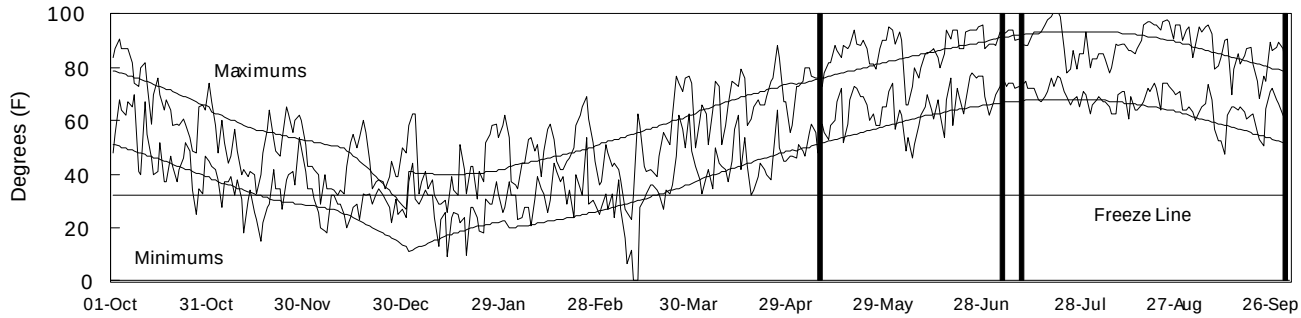
1998 GROWING CONDITONS:

Although the stands were somewhat variable, yields were adjusted to account for differences in plot size resulting from large gaps. An August storm caused most of the lodging.

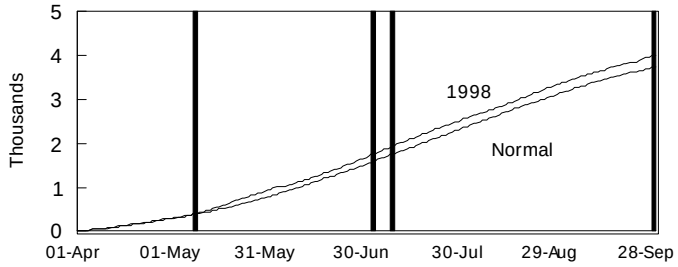
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	3.3	3.0	56	57	294	300
May	2.3	4.1	73	66	653	485
June	4.8	5.0	76	75	745	750
July	3.6	3.9	81	80	896	859
August	5.4	3.1	79	79	801	774
Sept.	9.3	4.1	73	70	668	597
Season Totals	28.6	23.3	73	71	4055	3765

TABLE 10. FRANKLIN CO. CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
HOEGEMEYER	2666	140	--	--	--	--	102	--	--	--	--	56	14	89	4	59
MATURITY CHECK	SHORT - C4111	89	140	--	114	--	65	90	--	64	13	56	14	82	27	57
AGRIPRO	AP 9565	141	--	--	--	--	103	--	--	--	--	57	14	85	9	58
ASGROW	RX730	139	--	--	--	--	101	--	--	--	--	57	14	94	4	59
ASGROW	RX760	133	--	--	--	--	97	--	--	--	--	57	14	91	10	57
DELANGE	DS 1885	139	--	--	--	--	101	--	--	--	--	57	14	90	3	58
GARST	8464	120	--	--	--	--	88	--	--	--	--	57	14	77	5	58
MIDLAND	764	144	--	--	--	--	105	--	--	--	--	57	14	90	5	59
MYCOGEN	2725	135	169	--	152	--	99	109	--	64	14	57	14	85	7	58
TERRA	E1128IT	114	--	--	--	--	83	--	--	--	--	57	14	84	7	59
ASGROW	RX826	144	--	--	--	--	106	--	--	--	--	58	14	93	3	59
CARGILL	7770	133	174	165	153	157	97	112	107	65	15	58	14	82	6	59
DEKALB	DK621	128	--	--	--	--	94	--	--	--	--	58	14	91	7	57
DEKALB	DK626BtX	157	--	--	--	--	115	--	--	--	--	58	14	85	4	58
DEKALB	DK641	139	168	161	154	156	102	109	104	65	14	58	14	91	9	58
GARST	8342	132	--	--	--	--	96	--	--	--	--	58	14	88	6	58
GOLDEN HARVEST	H-2581	147	166	164	156	159	108	107	106	65	15	58	14	88	0	58
HOEGEMEYER	2693	148	171	159	160	159	108	111	103	65	15	58	14	84	2	59
HOEGEMEYER	683 IMI	138	--	--	--	--	101	--	--	--	--	58	14	77	4	58
MATURITY CHECK	MID-H-2530	109	151	146	130	136	80	98	94	65	14	58	14	77	20	56
MATURITY CHECK	PIONEER 3162	120	171	--	145	--	88	110	--	65	15	58	14	88	13	60
MSG (OHLDE)	G 8699	152	171	--	162	--	111	111	--	66	15	58	14	87	3	59
MSG (OHLDE)	G 8440	147	--	--	--	--	108	--	--	--	--	58	14	91	12	59
NK	N7590BT	141	--	--	--	--	103	--	--	--	--	58	14	79	7	56
NK	N7639BT	135	--	--	--	--	99	--	--	--	--	58	14	90	5	61
NK	N79-L3	140	--	--	--	--	102	--	--	--	--	58	14	96	2	62
PIONEER	33A14	144	--	--	--	--	106	--	--	--	--	58	14	90	4	59
PIONEER	33R87	127	--	--	--	--	93	--	--	--	--	58	14	81	6	61
TERRA	E1148	139	--	--	--	--	102	--	--	--	--	58	14	82	4	58
TERRA	E1158IT	125	--	--	--	--	91	--	--	--	--	58	14	82	2	59
ASGROW	RX813	152	157	--	154	--	111	102	--	66	15	59	14	91	2	59
CARGILL	8011	138	166	--	152	--	101	107	--	66	15	59	14	82	8	57
FREEDOM	5555	129	--	--	--	--	94	--	--	--	--	59	14	87	10	58
HOEGEMEYER	2682	141	153	--	147	--	103	99	--	66	15	59	14	91	5	57
MIDLAND	747	133	--	--	--	--	98	--	--	--	--	59	14	89	5	58
MSG (OHLDE)	G 8511	137	--	--	--	--	100	--	--	--	--	59	14	78	2	58
NC+	5018	134	--	--	--	--	98	--	--	--	--	59	14	87	12	57
NC+	5445	141	164	168	153	158	103	106	109	65	14	59	14	88	3	58
GOLDEN HARVEST	H-2643IMI	140	--	--	--	--	103	--	--	--	--	60	14	88	6	59
PIONEER	3237	141	175	--	158	--	103	113	--	67	15	60	14	88	4	59
TERRA	TR1188	152	--	--	--	--	111	--	--	--	--	60	14	92	1	59
TERRA	E1178	155	--	--	--	--	113	--	--	--	--	60	14	90	13	58
TRIUMPH	1866	144	--	--	--	--	105	--	--	--	--	60	14	88	7	60
DELANGE	DS 1997	138	158	--	148	--	101	102	--	68	15	61	14	82	3	57
FREEDOM	5680	140	--	--	--	--	103	--	--	--	--	61	14	85	3	58
MIDLAND	709	133	--	--	--	--	98	--	--	--	--	61	14	80	6	58
MYCOGEN	2888	149	135	--	142	--	109	87	--	68	16	61	14	85	8	59
TERRA	TR1157	134	140	--	137	--	98	90	--	66	15	61	14	88	6	58
MIDLAND	798	127	--	--	--	--	93	--	--	--	--	62	14	75	5	59
AVERAGES		137	155	155	146	149	137	155	155	66	15	59	14	86	6	58
CV(%)		9	8	8	--	--	9	8	8	--	--	1	2	13	86	1
LSD(0.05)**		14	15	15	--	--	10	9	10	--	--	1	0	NS	6	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

1997CROP: Soybeans

1996 CROP: Soybeans

FERTILIZER (lbs/acre): 180 N 40 P_2O_5 40 K_2O

PLANTING DATE: 4/20/98

HARVEST DATE: 9/8/98

COOPERATORS:

James Long, agronomist

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

STAND (% of target): 95

YIELD: Average (bu/a): 163

Range (bu/a): 133 - 206

LSD (bu/a): 15

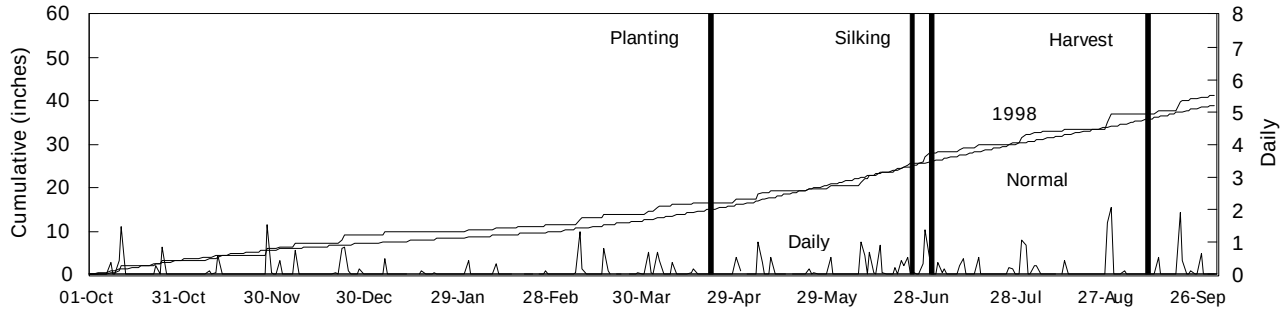
CV (%): 8

SILK DATES: 6/24/98 - 6/30/98

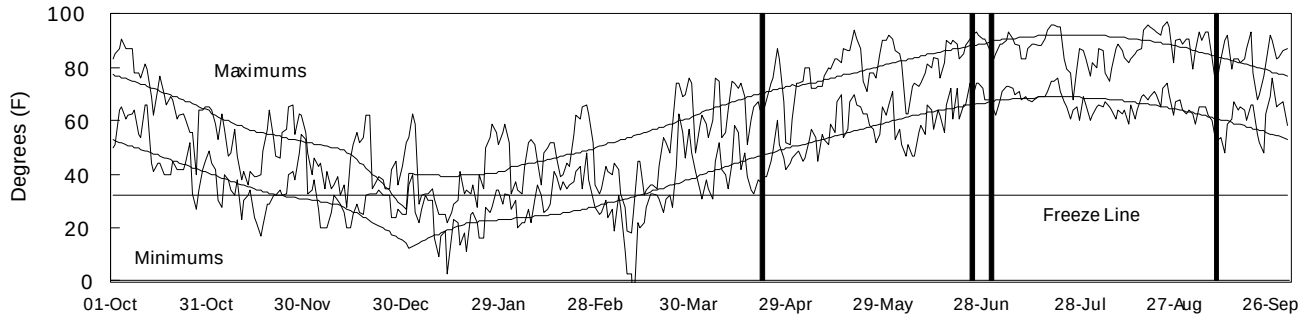
1998 GROWING CONDITONS:

Favorable temperatures and rainfall during the spring and much of the summer established a the test with excellent yield potential. Hot, dry conditions in late summer hastened maturation somewhat and may have lowered yields slightly.

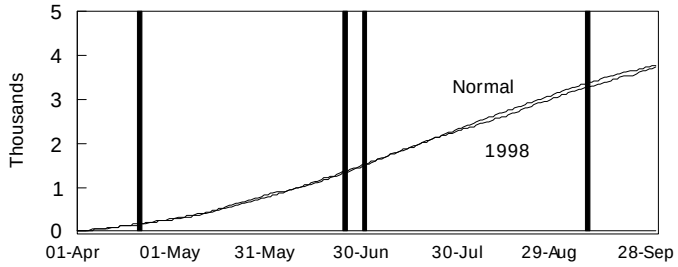
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	2.8	3.7	54	57	262	289
May	2.8	4.8	70	66	586	491
June	7.5	5.1	72	75	673	761
July	4.4	4.5	78	80	831	873
August	4.8	3.9	77	78	757	785
Sept.	4.1	4.5	73	70	657	605
Season Totals	26.4	26.4	71	71	3766	3804

TABLE 11. NEOSHO CO. CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	138	181	--	160	--	85	87	--	69	13	65	11	98	0	58
TERRA	E1128IT	138	--	--	--	--	85	--	--	--	--	65	12	97	0	60
ASGROW	RX730	149	--	--	--	--	92	--	--	--	--	66	11	95	0	57
DEKALB	DK626BtX	170	--	--	--	--	104	--	--	--	--	66	11	94	0	59
DELANGE	DS 1885	148	--	--	--	--	91	--	--	--	--	66	11	93	0	58
HOEGEMEYER	2645	146	--	--	--	--	90	--	--	--	--	66	11	91	0	57
MATURITY CHECK	MID-H-2530	149	199	157	174	168	92	95	89	70	14	66	11	95	0	58
MYCOGEN	2725	155	--	--	--	--	95	--	--	--	--	66	11	102	0	57
AGRIPRO	AP 9565	143	--	174	--	--	88	--	99	--	--	66	12	98	0	58
ASGROW	RX760	170	--	--	--	--	104	--	--	--	--	66	12	100	0	57
GARST	8342	133	--	--	--	--	82	--	--	--	--	66	12	98	0	59
NC+	5778	171	--	--	--	--	105	--	--	--	--	66	12	100	0	59
NK	N79-L3	175	--	--	--	--	107	--	--	--	--	66	12	102	0	61
DEKALB	DK641	173	225	199	199	199	106	108	113	71	14	67	11	91	0	59
HOEGEMEYER	2666	162	--	--	--	--	100	--	--	--	--	67	11	93	0	59
HOEGEMEYER	2650	172	--	--	--	--	106	--	--	--	--	67	11	95	0	57
MIDLAND	747	147	--	--	--	--	90	--	--	--	--	67	11	95	0	60
NC+	5018	175	--	--	--	--	107	--	--	--	--	67	11	99	0	58
TERRA	E1148	157	--	--	--	--	96	--	--	--	--	67	11	99	0	59
ASGROW	RX826	146	--	--	--	--	90	--	--	--	--	67	12	95	0	60
CARGILL	7770	163	216	163	190	181	100	103	93	71	15	67	12	95	0	60
GOLDEN HARVEST	H-2643IMI	179	--	--	--	--	110	--	--	--	--	67	12	93	0	60
GOLDEN HARVEST	H-2581	157	196	170	177	175	97	94	97	71	14	67	12	98	0	58
HOEGEMEYER	683 IMI	150	--	--	--	--	92	--	--	--	--	67	12	95	0	58
MYCOGEN	2815	154	--	--	--	--	94	--	--	--	--	67	12	93	0	58
NK	N7639BT	161	--	--	--	--	99	--	--	--	--	67	12	95	0	62
PIONEER	33A14	173	--	--	--	--	106	--	--	--	--	67	12	97	0	59
TERRA	E1158IT	164	--	--	--	--	101	--	--	--	--	67	12	91	0	59
TRIUMPH	1522	165	233	179	199	192	101	111	102	71	14	67	12	97	0	59
ASGROW	RX813	170	207	--	189	--	105	99	--	72	16	67	13	93	0	59
GARST	8222IT	160	--	--	--	--	98	--	--	--	--	67	13	92	0	60
MATURITY CHECK	PIONEER 3162	172	222	--	197	--	106	106	--	71	16	67	13	94	0	61
MIDLAND	786	173	--	--	--	--	106	--	--	--	--	68	12	96	0	59
NK	N83-N5	177	--	--	--	--	109	--	--	--	--	68	12	98	0	60
PIONEER	3237	178	--	--	--	--	109	--	--	--	--	68	12	92	0	60
TERRA	E1178	170	--	--	--	--	104	--	--	--	--	68	12	95	0	59
TERRA	TR1188	170	--	--	--	--	104	--	--	--	--	68	12	95	0	60
CARGILL	8412	175	--	--	--	--	107	--	--	--	--	69	12	98	0	60
MYCOGEN	2888	159	233	--	196	--	98	111	--	74	15	69	12	91	0	59
TERRA	TR1157	182	193	183	188	186	112	92	104	74	15	69	12	102	0	59
TRIUMPH	1866	182	--	--	--	--	112	--	--	--	--	69	12	94	0	60
AGRIPRO	AP 9828	171	--	--	--	--	105	--	--	--	--	69	13	88	0	60
DELANGE	DS 1995	143	184	184	163	170	88	88	105	74	14	70	12	90	0	60
PIONEER	31B13	206	--	--	--	--	127	--	--	--	--	70	12	102	0	60
DELANGE	DS 1997	162	226	--	194	--	99	108	--	74	14	71	12	86	0	58
AVERAGES		163	209	176	186	183	163	209	176	72	15	67	12	95	0	59
CV(%)		8	8	8	--	--	8	8	8	--	--	1	2	6	507	1
LSD(0.05)**		15	21	16	--	--	9	10	9	--	--	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.

TABLE 12. EASTERN KANSAS CORN TEST YIELD SUMMARY, 1996-1998.

			1998 YIELD AS % OF TEST AVERAGE[1]				1996-1998		
	BRAND	NAME	SHD	FRA	NEO	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
	PIONEER	3237	--	103	109	--	18.02 *	2.47	4
	MYCOGEN	2888	122	109	98	110	16.07	9.41	6
	DEKALB	DK641	--	102	106	--	15.08 *	2.03	7
	ASGROW	RX813	105	111	105	107	12.06	5.65	6
	DELANGE	DS 1997	109	101	99	103	11.37	4.62	5
	NC+	5445	106	103	--	--	10.6	6.03	6
c	MATURITY CHECK	PIONEER 3162	101	88	106	98	8.21 *	1.19	6
	TRIUMPH	1522	--	--	101	--	7.23	4.69	4
	GOLDEN HARVEST	H-2581	101	108	97	102	7.12	4.74	9
	CARGILL	7770	--	97	100	--	5.56	4.17	7
	CARGILL	8011	--	101	--	--	4.92	6.25	4
	TERRA	TR1157	--	98	112	--	4.73	7.37	6
	MYCOGEN	2725	91	99	95	95	3.09	4.7	5
	AGRIPRO	AP 9565	96	103	88	96	0.18	8.18	4
	DELANGE	DS 1995	91	--	88	--	-6.23	5.25	7
c	MATURITY CHECK	MID-H-2530	92	80	92	88	-10.68 *	2.09	9
	MATURITY CHECK	SHORT - C4111	69	65	85	73	-26.08 *	3.94	6
	AGRIPRO	AP 9828	--	--	105	--	--	--	--
	ASGROW	RX730	91	101	92	95	--	--	--
	ASGROW	RX760	91	97	104	98	--	--	--
	ASGROW	RX826	82	106	90	92	--	--	--
	CARGILL	8412	130	--	107	--	--	--	--
	DEKALB	DK621	88	94	--	--	--	--	--
	DEKALB	DK626BtX	96	115	104	105	--	--	--
	DELANGE	DS 1885	--	101	91	--	--	--	--
	FREEDOM	5555	--	94	--	--	--	--	--
	FREEDOM	5680	--	103	--	--	--	--	--
	GARST	8222IT	--	--	98	--	--	--	--
	GARST	8342	91	96	82	90	--	--	--
	GARST	8464	--	88	--	--	--	--	--
	GOLDEN HARVEST	H-2547	91	--	--	--	--	--	--
	GOLDEN HARVEST	H-2643IMI	--	103	110	--	--	--	--
	HOEGEMEYER	2645	--	--	90	--	--	--	--
	HOEGEMEYER	2650	--	--	106	--	--	--	--
	HOEGEMEYER	2666	--	102	100	--	--	--	--
	HOEGEMEYER	2682	--	103	--	--	--	--	--
	HOEGEMEYER	2693	--	108	--	--	--	--	--
	HOEGEMEYER	683 IMI	--	101	92	--	--	--	--
	MIDLAND	747	106	98	90	98	--	--	--

(continued)

TABLE 12. EASTERN KANSAS CORN TEST YIELD SUMMARY, 1996-1998.

		1998 YIELD AS % OF TEST AVERAGE[1]				1996-1998		
BRAND	NAME	SHD	FRA	NEO	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
MIDLAND	764	--	105	--	--	--	--	--
MIDLAND	774	104	--	--	--	--	--	--
MIDLAND	786	--	--	106	--	--	--	--
MIDLAND	709	--	98	--	--	--	--	--
MIDLAND	798	--	93	--	--	--	--	--
MSG (OHLDE)	G 8440	--	108	--	--	--	--	--
MSG (OHLDE)	G 8511	--	100	--	--	--	--	--
MSG (OHLDE)	G 8699	--	111	--	--	--	--	--
MYCOGEN	2815	--	--	94	--	--	--	--
NC+	5018	109	98	107	105	--	--	--
NC+	5778	--	--	105	--	--	--	--
NC+	6959	102	--	--	--	--	--	--
NK	N7590BT	--	103	--	--	--	--	--
NK	N7639BT	103	99	99	100	--	--	--
NK	N79-L3	112	102	107	107	--	--	--
NK	N83-N5	--	--	109	--	--	--	--
PIONEER	31B13	--	--	127	--	--	--	--
PIONEER	33A14	110	106	106	107	--	--	--
PIONEER	33R87	110	93	--	--	--	--	--
PIONEER	34K77	101	--	--	--	--	--	--
TERRA	E1128IT	--	83	85	--	--	--	--
TERRA	E1148	--	102	96	--	--	--	--
TERRA	E1158IT	--	91	101	--	--	--	--
TERRA	TR1188	--	111	104	--	--	--	--
TERRA	E1178	--	113	104	--	--	--	--
TRIUMPH	1866	--	105	112	--	--	--	--
AVERAGES	(bushels/acre)	159	137	163	153	--	--	--
LSD(0.05)**		9	10	9	--	--	--	--

1 SHD =Shawnee Co. Test, Dr. Dick Geis Farm, northwest of Topeka FRA = Franklin Co. Test, East Central Exp. Field, Ottawa
NEO = Neosho Co. Test, Farmer's Field, Erie

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

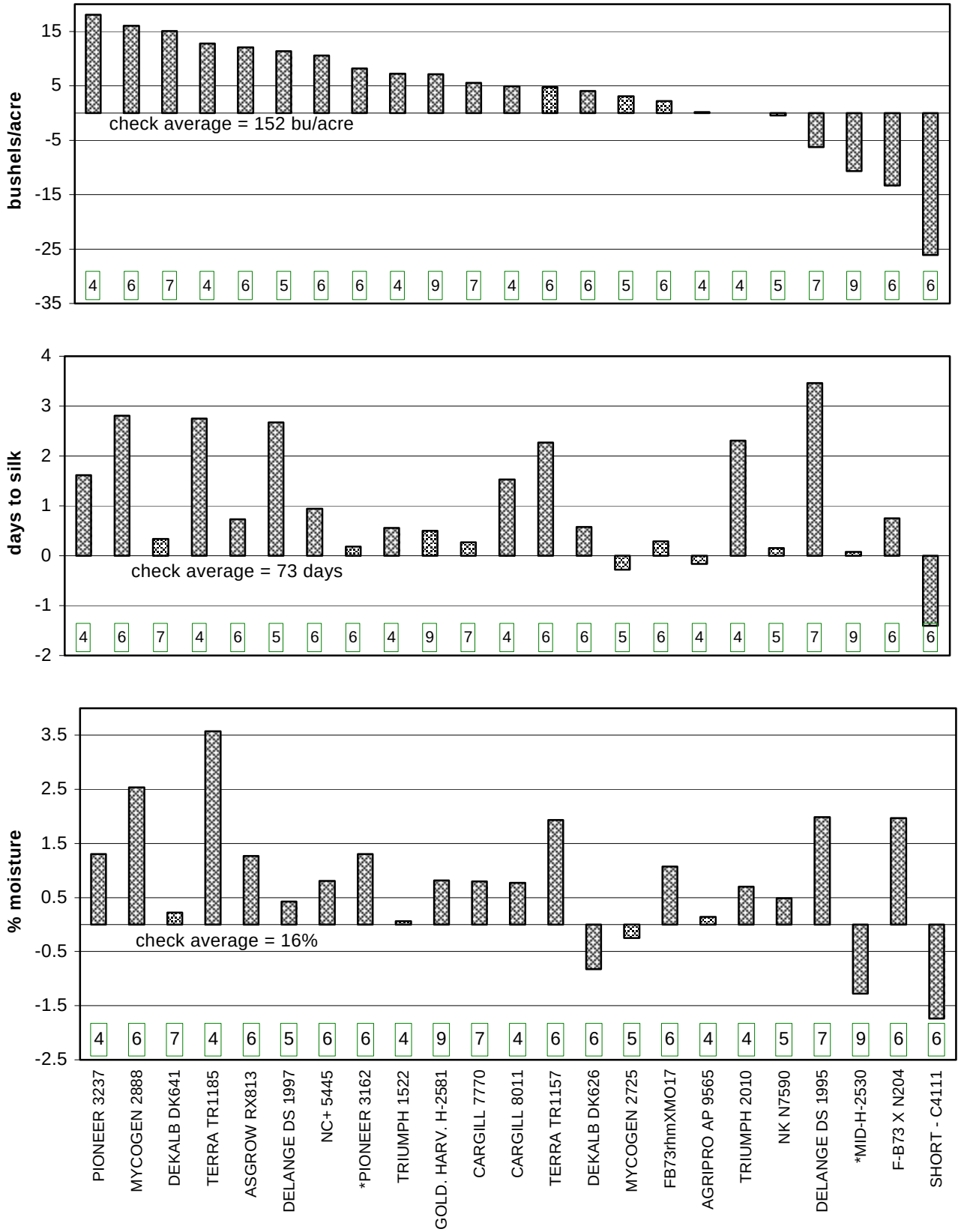
3 SE = Standard Error of DYA; measure of consistency of yield differences.

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; each hybrid 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, 1996-1998.



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

1997CROP: Fallow

1996 CROP: Sorghum

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

PLANTING DATE: 5/1/98

HARVEST DATE: 9/29/98

COOPERATORS:

Ken Kofoid, agronomist

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

STAND (% of target): 117

YIELD: Average (bu/a): 99

Range (bu/a): 83 - 114

LSD (bu/a): 10

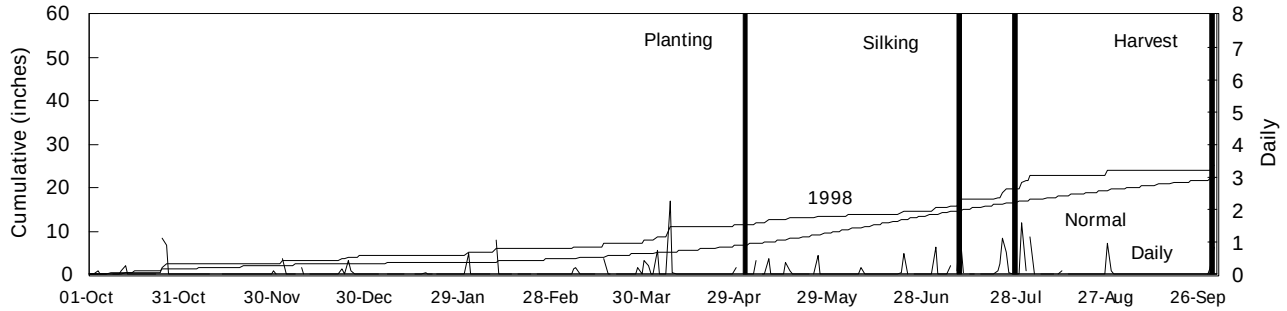
CV (%): 8

SILK DATES: 7/9/98 - 7/27/98

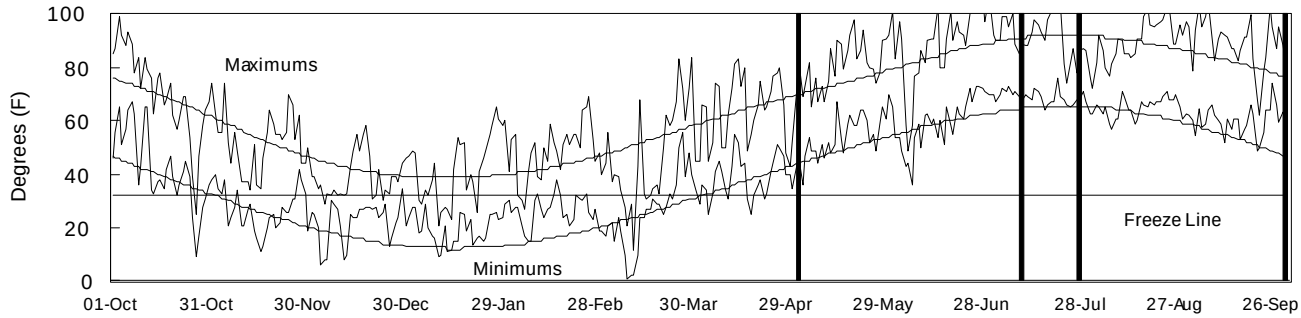
1998 GROWING CONDITONS:

Excellent emergence and establishment resulted in higher stands than anticipated. However, except for a hot, dry period in June and early July, rainfall and temperatures were favorable and resulted in excellent yields.

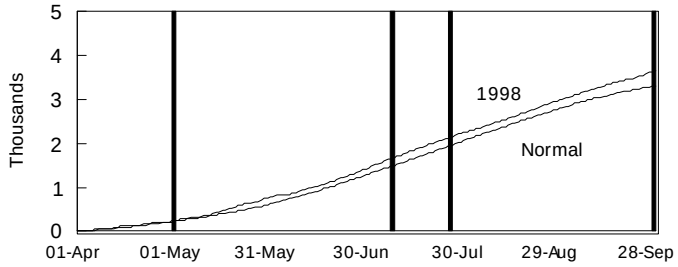
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	3.5	2.0	52	51	235	225
May	2.1	3.1	68	62	537	386
June	1.1	3.9	74	72	660	675
July	6.9	3.3	79	78	846	811
August	2.4	2.7	78	76	748	728
Sept.	1.0	2.1	74	67	651	521
Season Totals	17.0	17.0	71	68	3675	3345

TABLE 13. ELLIS CO. DRYLAND CORN PERFORMANCE TEST RESULTS, 1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1995	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1995	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
NK	N4640BT	93	--	--	--	--	94	--	--	--	--	69	11	115	1	58
MATURITY CHECK	SHORT - C4111	83	--	--	--	--	84	--	--	--	--	72	11	113	29	58
ASGROW	RX623IMI	99	--	--	--	--	100	--	--	--	--	72	12	112	38	58
DEKALB	DK586	91	--	--	--	--	92	--	--	--	--	74	11	120	23	56
GARST	8600IT	94	--	--	--	--	95	--	--	--	--	74	12	116	32	60
NK	N53-MI	98	--	--	--	--	99	--	--	--	--	74	12	118	12	58
PIONEER	35N05	99	--	--	--	--	101	--	--	--	--	74	12	111	1	59
PIONEER	34K77	95	--	--	--	--	96	--	--	--	--	74	13	121	41	59
MIDLAND	764	103	--	--	--	--	105	--	--	--	--	74	15	118	41	58
GARST	8543IT	99	--	--	--	--	100	--	--	--	--	75	15	112	31	57
MATURITY CHECK	MID-H-2530	104	--	--	--	--	106	--	--	--	--	76	11	119	24	56
NC+	4616	109	--	--	--	--	111	--	--	--	--	76	14	114	38	58
ASGROW	RX730	93	--	--	--	--	94	--	--	--	--	76	15	116	42	58
ASGROW	RX799Bt	114	--	--	--	--	115	--	--	--	--	76	17	122	0	59
MATURITY CHECK	PIONEER 3162	93	--	--	--	--	94	--	--	--	--	78	15	116	44	61
MIDLAND	774	93	--	--	--	--	94	--	--	--	--	78	15	115	35	55
ASGROW	XP8897	102	--	--	--	--	104	--	--	--	--	80	16	118	33	57
MIDLAND	786	105	--	--	--	--	106	--	--	--	--	83	17	117	33	55
MIDLAND	709	104	--	--	--	--	106	--	--	--	--	85	17	120	26	55
MIDLAND	798	104	--	--	--	--	106	--	--	--	--	86	19	121	24	57
AVERAGES		99	--	--	--	--	99	--	--	--	--	76	14	117	27	58
CV(%)		8	--	--	--	--	8	--	--	--	--	2	7	5	29	1
LSD(0.05)**		10	--	--	--	--	10	--	--	--	--	2	1	NS	9	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, NO-TILL DRYLAND

COUNTY: THOMAS

LOCATION: Northwest Research-Extension Center, Colby

TEST SITE: Keith silt loam

1997CROP: Wheat

1996 CROP: Fallow

FERTILIZER (lbs/acre): 110 N 15 P_2O_5 0 K_2O

PLANTING DATE: 4/29/98

HARVEST DATE: 9/28/98

COOPERATORS:

Patrick Evans, agronomist

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

STAND (% of target): 94

YIELD: Average (bu/a): 145

Range (bu/a): 124 - 166

LSD (bu/a): 12

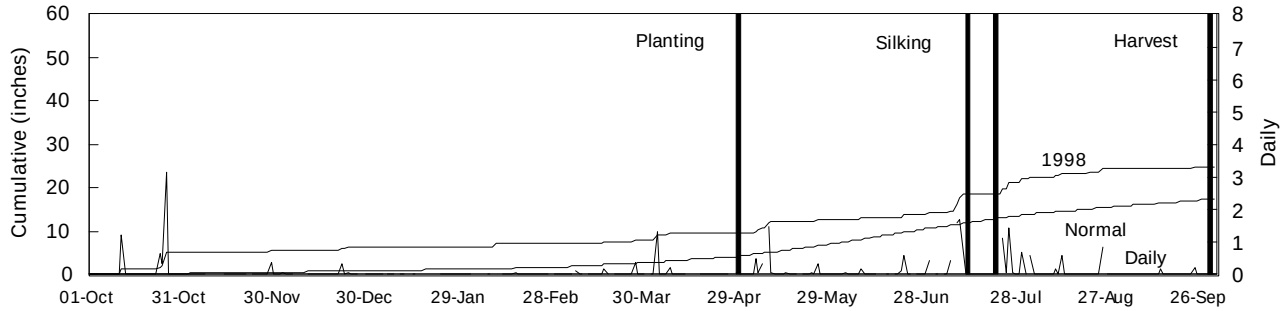
CV (%): 7

SILK DATES: 7/12/98 - 7/21/98

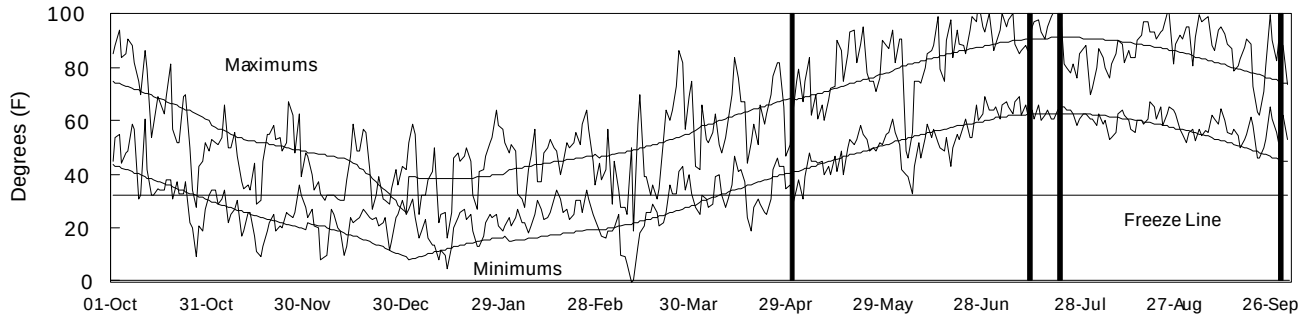
1998 GROWING CONDITONS:

Very good planting conditions provided good stand establishment. Excellent growing conditions characterized by above-normal precipitation in July resulted in very high yields. Corn rootworms and spider mites were noted but appeared to cause little damage.

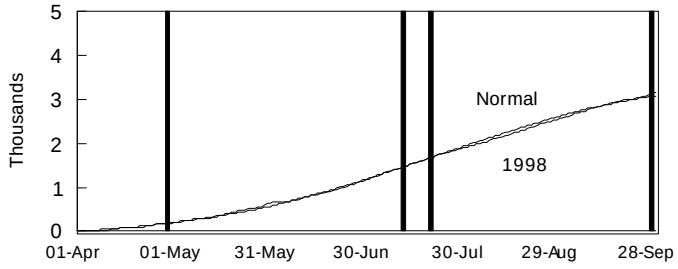
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	1.7	1.5	48	50	191	209
May	3.1	2.9	63	60	431	353
June	1.5	3.6	69	71	554	631
July	7.9	3.1	77	77	758	775
August	2.4	2.0	74	74	667	683
Sept.	0.5	1.6	71	65	579	466
Season Totals	16.9	14.6	67	66	3179	3116

TABLE 14. THOMAS CO. DRYLAND CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
NK	N4640BT	124	--	--	--	--	85	--	--	--	--	74	12	95	1	59
AGRIPRO	AP 9489	133	86	--	110	--	92	99	--	79	14	74	14	92	0	58
MATURITY CHECK	SHORT - C4111	131	71	--	101	--	90	81	--	81	13	75	13	94	1	60
OTTILIE	4888	128	--	--	--	--	88	--	--	--	--	76	13	98	0	61
DEKALB	DK586	139	--	--	--	--	96	--	--	--	--	76	14	92	0	58
PIONEER	35N05	151	--	--	--	--	104	--	--	--	--	76	14	99	0	59
ASGROW	RX623IMI	134	--	--	--	--	92	--	--	--	--	76	15	88	0	59
PIONEER	34K77	143	--	--	--	--	98	--	--	--	--	76	16	98	0	58
ASGROW	RX730	151	--	--	--	--	104	--	--	--	--	76	17	97	0	56
NK	N53-MI	137	--	--	--	--	94	--	--	--	--	77	14	97	0	59
PIONEER	3489	143	98	127	121	123	99	113	109	82	14	77	14	97	0	59
AGRIPRO	AP 9565	148	89	--	119	--	102	102	--	82	17	77	17	88	0	57
TRIUMPH	1141	151	--	--	--	--	104	--	--	--	--	77	17	95	0	57
KAYSTAR	KX - 777	134	--	--	--	--	93	--	--	--	--	78	15	95	0	57
MYCOGEN	2722	140	--	--	--	--	97	--	--	--	--	78	15	94	0	57
AGRIPRO	AP 9520	148	--	--	--	--	102	--	--	--	--	78	16	92	0	56
NC+	4646	144	--	--	--	--	99	--	--	--	--	78	16	97	0	57
CARGILL	6888	156	--	--	--	--	108	--	--	--	--	78	17	97	0	56
MATURITY CHECK	MID-H-2530	137	83	124	110	115	94	95	107	85	15	80	15	97	0	57
KAYSTAR	KX - 808	139	--	--	--	--	96	--	--	--	--	80	16	86	0	56
NC+	4616	156	72	113	114	114	108	82	98	85	17	80	18	94	0	56
MATURITY CHECK	PIONEER 3162	164	90	--	127	--	113	103	--	85	20	80	21	98	0	57
MIDLAND	774	157	--	--	--	--	108	--	--	--	--	81	18	96	0	55
CARGILL	7770	155	114	--	135	--	107	131	--	86	18	81	19	84	0	56
ASGROW	RX799Bt	166	--	--	--	--	114	--	--	--	--	82	21	95	0	55
ASGROW	XP8897	164	--	--	--	--	113	--	--	--	--	82	22	87	0	54
AVERAGES		145	87	116	116	116	145	87	116	83	16	78	16	94	0	57
CV(%)		7	17	9	--	--	7	17	9	--	--	1	6	8	423	2
LSD(0.05)**		12	18	13	--	--	8	20	11	--	--	1	1	NS	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

1997CROP: Wheat

1996 CROP: Fallow

FERTILIZER (lbs/acre): 88 N 28 P_2O_5 0 K_2O

PLANTING DATE: 4/24/98

HARVEST DATE: 9/21/98

COOPERATORS:

Alan Schlegel, agronomist; David Frickel, research associate

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

STAND (% of target): 116

YIELD: Average (bu/a): 62

Range (bu/a): 42 - 85

LSD (bu/a): 11

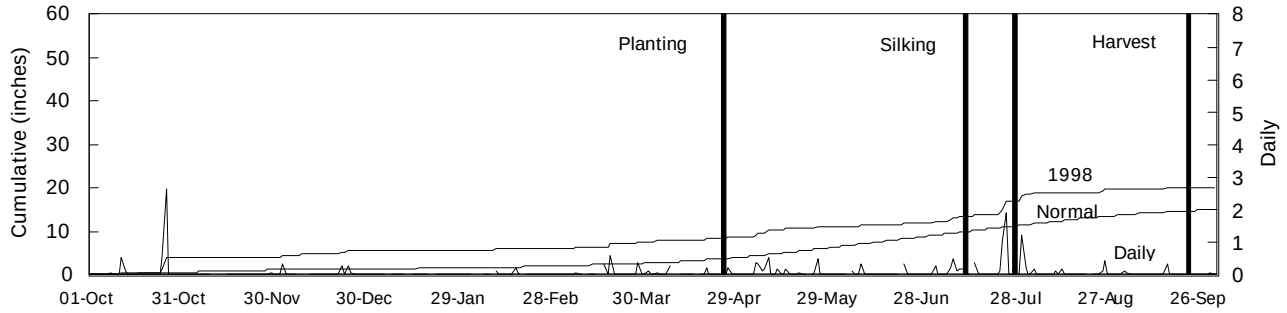
CV (%): 16

SILK DATES: 7/11/98 - 7/27/98

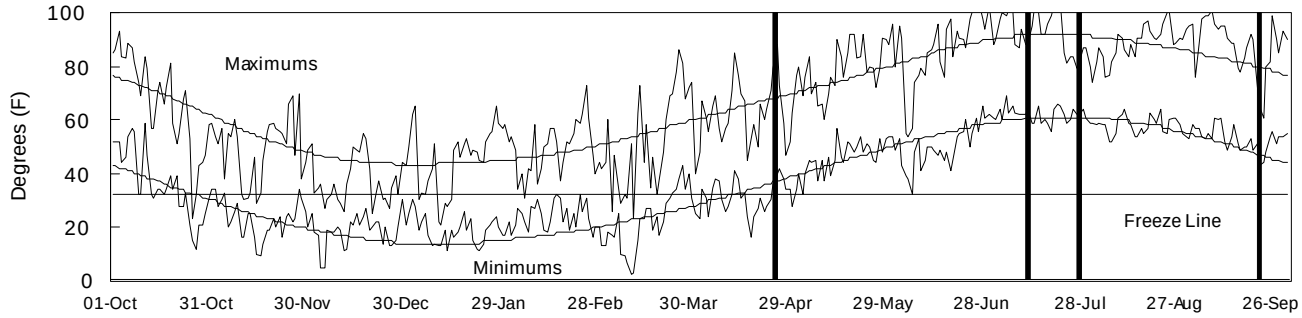
1998 GROWING CONDITONS:

Excellent emergence resulted in good stands, but April, May, and June precipitation was below normal. Above-normal precipitation in July provided much-need moisture, but most hybrids had already silked before the rains came. The dry conditions early in the season combined with extreme heat introduced some variability in plot yields, but large differences were detected.

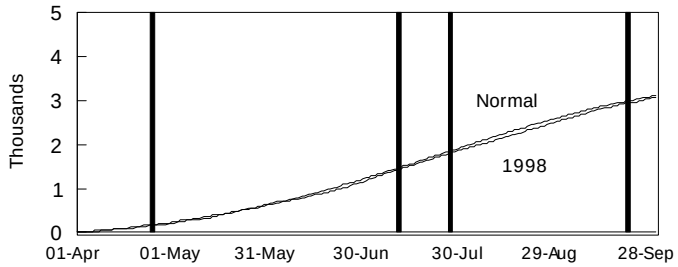
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	0.9	1.4	47	50	212	242
May	2.5	2.3	63	60	440	381
June	0.9	2.6	68	71	533	619
July	6.6	2.5	77	76	746	746
August	1.1	2.1	74	74	639	668
Sept.	0.6	1.3	70	65	547	490
Season Totals	12.5	12.3	67	66	3117	3144

TABLE 15. GREELEY CO. DRYLAND CORN PERFORMANCE TEST RESULTS, 1995-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1995	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1995	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
NK	N4640BT	43	--	--	--	--	69	--	--	--	--	78	15	124	0	57
OTTILIE	4888	55	--	--	--	--	88	--	--	--	--	81	19	113	0	57
PIONEER	35N05	53	--	--	--	--	86	--	--	--	--	81	19	124	0	56
NK	N53-MI	63	--	--	--	--	101	--	--	--	--	82	19	114	0	56
PIONEER	3489	42	155	42	99	80	68	103	139	81	19	82	20	109	0	54
WILSON	1664	54	--	--	--	--	86	--	--	--	--	82	22	114	0	53
ASGROW	RX623IMI	69	--	--	--	--	111	--	--	--	--	83	18	116	0	57
PIONEER	34K77	59	--	--	--	--	94	--	--	--	--	83	19	124	0	55
MYCOGEN	2722	77	--	--	--	--	123	--	--	--	--	83	21	104	0	53
DEKALB	DK586	73	--	--	--	--	116	--	--	--	--	84	18	103	1	53
WILSON	E6013	55	--	--	--	--	88	--	--	--	--	84	19	118	1	55
MATURITY CHECK	SHORT - C4111	55	128	--	92	--	88	86	--	81	18	84	20	117	0	54
OTTILIE	5480	61	--	--	--	--	98	--	--	--	--	85	21	117	0	52
ASGROW	RX730	49	--	--	--	--	78	--	--	--	--	85	22	118	0	52
MATURITY CHECK	MID-H-2530	67	140	27	103	78	107	93	89	84	18	88	17	114	0	54
MATURITY CHECK	PIONEER 3162	62	153	--	107	--	99	102	--	85	25	90	25	118	0	53
CARGILL	7770	85	169	--	127	--	136	113	--	87	23	92	23	117	0	53
ASGROW	RX799Bt	81	--	--	--	--	130	--	--	--	--	93	21	120	1	53
MIDLAND	774	60	--	--	--	--	96	--	--	--	--	93	24	109	0	50
CARGILL	8412	77	--	--	--	--	123	--	--	--	--	94	22	118	0	53
ASGROW	XP8897	72	--	--	--	--	116	--	--	--	--	94	25	121	0	51
AVERAGES		62	150	31	106	81	62	150	31	83	21	86	20	116	0	54
CV(%)		16	9	24	--	--	16	9	24	--	--	2	7	8	339	2
LSD(0.05)**		11	16	9	--	--	18	11	29	--	--	2	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.

TABLE 16. WESTERN KANSAS DRYLAND CORN TEST YIELD SUMMARY, 1996-1998.

			1998 YIELD AS % OF TEST AVERAGE[1]				1996-1998		
	BRAND	NAME	ELL	THD	GRD	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
	CARGILL	7770	--	107	136	--	18.9 *	4.33	4
	NC+	4616	111	108	--	--	3.45	4.97	5
c	MATURITY CHECK	PIONEER 3162	94	113	99	102	3.04	3.03	5
	PIONEER	3489	--	99	68	--	0.52	5.9	5
c	MATURITY CHECK	MID-H-2530	106	94	107	102	-1.18	3.05	6
	MATURITY CHECK	SHORT - C4111	84	90	88	88	-15.53 *	1.57	5
	AGRIPRO	AP 9489	--	92	--	--	--	--	--
	AGRIPRO	AP 9520	--	102	--	--	--	--	--
	AGRIPRO	AP 9565	--	102	--	--	--	--	--
	ASGROW	RX623IMI	100	92	111	101	--	--	--
	ASGROW	RX730	94	104	78	92	--	--	--
	ASGROW	RX799Bt	115	114	130	120	--	--	--
	ASGROW	XP8897	104	113	116	111	--	--	--
	CARGILL	6888	--	108	--	--	--	--	--
	CARGILL	8412	--	--	123	--	--	--	--
	DEKALB	DK586	92	96	116	101	--	--	--
	GARST	8543IT	100	--	--	--	--	--	--
	GARST	8600IT	95	--	--	--	--	--	--
	KAYSTAR	KX - 777	--	93	--	--	--	--	--
	KAYSTAR	KX - 808	--	96	--	--	--	--	--
	MIDLAND	764	105	--	--	--	--	--	--
	MIDLAND	774	94	108	96	99	--	--	--
	MIDLAND	786	106	--	--	--	--	--	--
	MIDLAND	709	106	--	--	--	--	--	--
	MIDLAND	798	106	--	--	--	--	--	--
	MYCOGEN	2722	--	97	123	--	--	--	--
	NC+	4646	--	99	--	--	--	--	--
	NK	N4640BT	94	85	69	83	--	--	--
	NK	N53-MI	99	94	101	98	--	--	--
	OTTILIE	4888	--	88	88	--	--	--	--
	OTTILIE	5480	--	--	98	--	--	--	--
	PIONEER	34K77	96	98	94	96	--	--	--
	PIONEER	35N05	101	104	86	97	--	--	--
	TRIUMPH	1141	--	104	--	--	--	--	--
	WILSON	1664	--	--	86	--	--	--	--
	WILSON	E6013	--	--	88	--	--	--	--
	AVERAGES	(bushels/acre)	99	145	62	102	--	--	--
	LSD(0.05)**		10	8	18	--	--	--	--

1 ELL =Ellis Co. Dryland Test, KSU Res.-Ext. Center, Hays THD =Thomas Co. Dryland Test, NW Res.-Ext. Center, Colby GRD = Greeley Co. Dryland Test, SW Res.-Ext. Center, Tribune

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

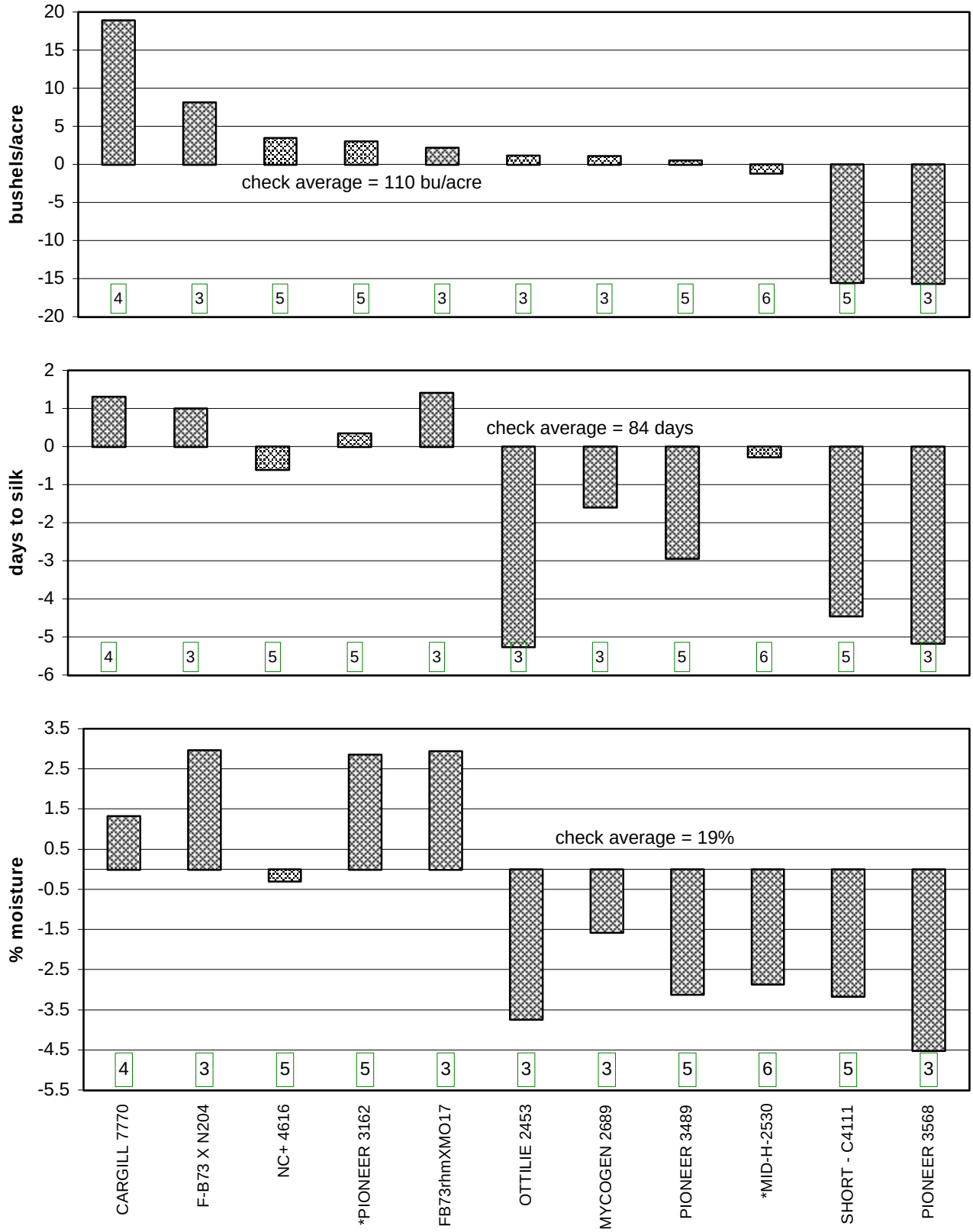
3 SE = Standard Error of DYA; measure of consistency of yield differences.

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; each hybrid 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, 1996-1998.



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

1997CROP: Wheat

1996 CROP: Corn

FERTILIZER (lbs/acre): 290 N 46 P_2O_5 0 K_2O

PLANTING DATE: 4/21/98

HARVEST DATE: 9/15/98

COOPERATORS:

Victor Martin, agronomist

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

STAND (% of target): 100

YIELD: Average (bu/a): 197

Range (bu/a): 158 - 233

LSD (bu/a): 22

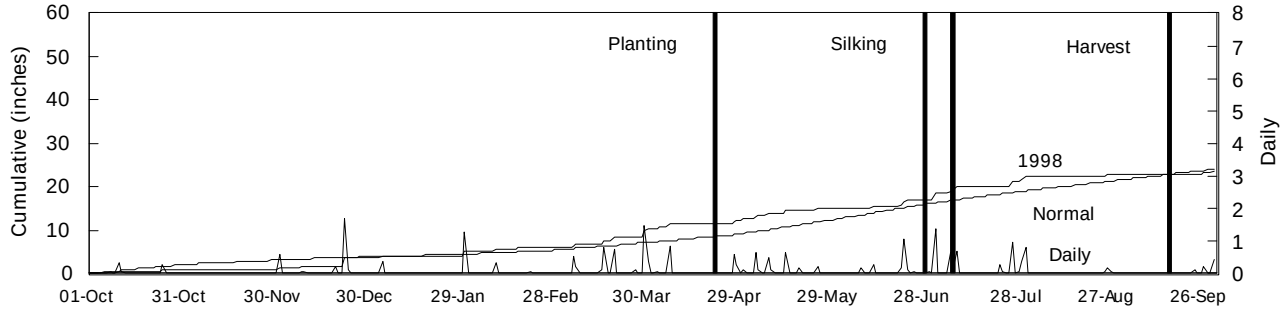
CV (%): 10

SILK DATES: 6/28/98 - 7/7/98

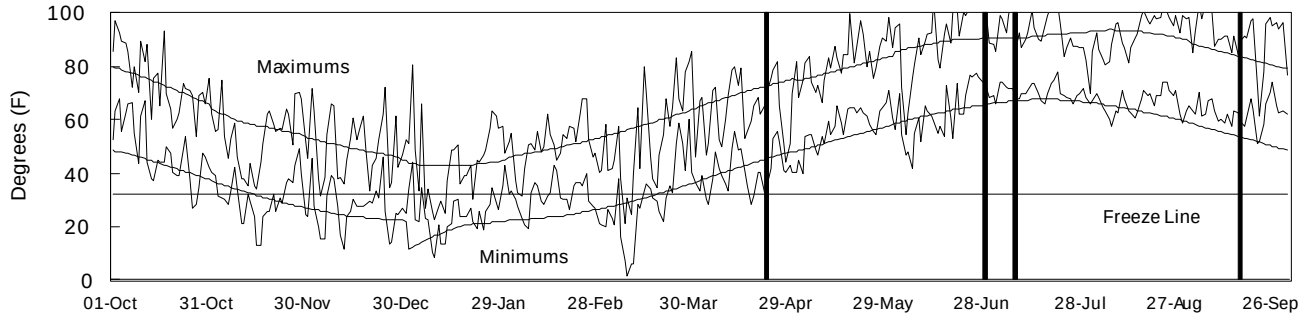
1998 GROWING CONDITONS:

Good seedbed conditions resulted in good stands for most entries. May and June were much drier than normal. Temperatures in May and June fluctuated between moderately below and well above normal. July precipitation was well above normal. Insecticide was applied in late July for corn borer control. No appreciable precipitation fell in August and September. Temperatures continued well above normal, and the crop matured and ripened rapidly.

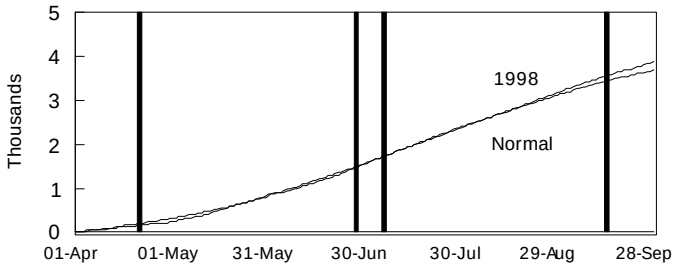
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	2.1	2.1	53	57	248	320
May	2.5	3.3	70	66	589	493
June	2.0	3.8	77	76	716	756
July	5.5	2.9	81	79	886	851
August	0.3	2.4	80	78	776	734
Sept.	0.9	2.5	77	69	700	559
Season Totals	13.3	16.9	73	71	3914	3714

TABLE 17. STAFFORD CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	166	164	--	165	--	84	74	--	71	13	68	11	107	1	60
TERRA	E1128IT	158	--	--	--	--	80	--	--	--	--	68	13	91	2	61
MILLER PREF.	MP-1123	187	233	--	210	--	95	106	--	72	15	69	12	105	1	60
AGRIPRO	AP 9520	200	--	--	--	--	101	--	--	--	--	70	12	97	2	60
ASGROW	RX730	182	--	--	--	--	92	--	--	--	--	70	12	102	1	60
HOEGEMEYER	2666	191	--	--	--	--	97	--	--	--	--	70	12	104	3	60
MIDLAND	764	177	--	--	--	--	90	--	--	--	--	70	12	93	1	60
NK	N7590BT	228	--	--	--	--	116	--	--	--	--	70	12	104	0	59
PIONEER	33A14	215	--	--	--	--	109	--	--	--	--	70	12	113	1	61
HPH	KS 5119	172	205	--	189	--	87	93	--	73	14	71	11	99	1	60
AGRIPRO	AP 9565	179	210	205	194	198	91	95	109	73	14	71	12	95	2	60
CARGILL	6888	179	217	--	198	--	91	98	--	73	14	71	12	96	3	59
GARST	8366	197	207	--	202	--	100	94	--	74	14	71	12	87	3	60
GARST	8342	204	--	--	--	--	104	--	--	--	--	71	12	113	1	60
MATURITY CHECK	PIONEER 3162	177	200	187	188	188	90	91	99	73	15	71	12	90	8	63
NC+	6868	219	--	--	--	--	111	--	--	--	--	71	12	105	1	60
MATURITY CHECK	MID-H-2530	183	210	175	197	189	93	96	93	75	13	72	11	102	0	59
TERRA	E1148	193	--	--	--	--	98	--	--	--	--	72	11	112	2	61
AGRIPRO	AP 619	199	230	201	214	210	101	104	107	74	14	72	12	98	0	59
DEKALB	DK632	196	--	--	--	--	99	--	--	--	--	72	12	98	3	60
HPH	KS 5141	206	--	--	--	--	104	--	--	--	--	72	12	99	4	60
HPH	KS 1155	204	--	--	--	--	103	--	--	--	--	72	12	104	0	60
MILLER PREF.	MP-1155	209	--	--	--	--	106	--	--	--	--	72	12	95	2	60
MSG (OHLDE)	G 8699	218	210	--	214	--	111	95	--	75	14	72	12	107	1	61
NC+	5445	205	219	192	212	205	104	99	102	74	15	72	12	96	2	59
NK	N79-L3	216	--	--	--	--	109	--	--	--	--	72	12	102	0	63
NK	N7639BT	220	--	--	--	--	112	--	--	--	--	72	12	110	2	63
PIONEER	32J55	201	246	--	223	--	102	112	--	75	15	72	12	99	7	62
TRIUMPH	1514	185	228	192	206	202	94	104	102	75	14	72	12	86	1	59
ASGROW	RX813	203	--	--	--	--	103	--	--	--	--	72	13	107	1	60
TERRA	E1158IT	182	--	--	--	--	92	--	--	--	--	72	13	99	2	60
ASGROW	XP8897	214	--	--	--	--	108	--	--	--	--	73	12	103	1	59
MSG (OHLDE)	G 8511	180	241	199	210	206	91	109	106	76	14	73	12	91	0	59
MSG (OHLDE)	G 8771	190	225	199	208	205	96	102	106	77	15	73	12	96	1	59
PIONEER	31A12	201	--	--	--	--	102	--	--	--	--	73	12	104	5	61
PIONEER	32K61	172	244	--	208	--	87	111	--	76	14	73	12	106	1	62

(continued)

TABLE 17. STAFFORD CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
ASGROW	RX799Bt	180	--	--	--	--	91	--	--	--	--	73	13	90	8	60
DEKALB	DK687	195	224	--	209	--	99	102	--	76	15	73	13	101	2	60
HPH	KS 2186	194	215	--	205	--	98	98	--	75	15	73	13	93	3	60
MIDLAND	774	189	221	--	205	--	96	100	--	75	15	73	13	100	0	59
GARST	8222IT	190	--	--	--	--	96	--	--	--	--	73	14	97	4	61
CARGILL	8412	205	--	--	--	--	104	--	--	--	--	74	12	100	11	61
DELANGE	DS 1997	207	228	--	217	--	105	103	--	77	14	74	12	100	2	60
HOEGEMEYER	683 IMI	205	--	--	--	--	104	--	--	--	--	74	12	101	1	60
HOEGEMEYER	2761	194	--	--	--	--	98	--	--	--	--	74	12	100	2	60
MIDLAND	798	195	--	--	--	--	99	--	--	--	--	74	12	93	2	61
MIDLAND	709	201	--	--	--	--	102	--	--	--	--	74	12	97	1	60
MIDLAND	786	210	244	--	227	--	107	111	--	78	14	74	12	103	2	60
MILLER PREF.	MP-1133	198	232	--	215	--	100	105	--	76	15	74	12	107	7	59
MYCOGEN	2888	226	249	--	238	--	115	113	--	77	15	74	12	107	2	61
PIONEER	3237	223	242	205	233	224	113	110	109	76	14	74	12	108	2	60
TERRA	E1178	190	--	--	--	--	96	--	--	--	--	74	12	83	2	60
TERRA	TR1157	208	--	193	--	--	105	--	102	--	--	74	12	107	3	59
DEKALB	DK679	215	--	--	--	--	109	--	--	--	--	74	13	100	1	61
GOLDEN HARVEST	H-2643IMI	197	--	--	--	--	100	--	--	--	--	74	13	99	4	61
PIONEER	31B13	233	--	--	--	--	118	--	--	--	--	74	13	105	3	61
TERRA	TR1188	182	--	--	--	--	92	--	--	--	--	74	13	90	2	60
TRIUMPH	1866	195	--	--	--	--	99	--	--	--	--	74	13	98	0	60
WILSON	2330	210	232	191	221	211	106	106	101	78	16	75	13	95	3	59
NC+	7117	182	--	181	--	--	92	--	96	--	--	76	11	97	5	60
MYCOGEN	8460	195	258	191	226	215	99	117	102	79	16	76	12	109	13	59
WILSON	2335	197	246	172	221	205	100	112	91	79	17	76	14	99	3	59
WILSON	E975307	202	--	--	--	--	103	--	--	--	--	76	14	105	1	59
AVERAGES		197	220	188	209	202	197	220	188	75	14	73	12	100	2	60
CV(%)		10	9	8	--	--	10	9	8	--	--	2	3	11	184	1
LSD(0.05)**		22	22	18	--	--	11	10	9	--	--	1	1	12	NS	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

1997CROP: Sunflowers

1996 CROP: Sorghum

FERTILIZER (lbs/acre): 250 N 30 P_2O_5 0 K_2O

PLANTING DATE: 4/30/98

HARVEST DATE: 10/13/98

COOPERATORS:

Patrick Evans, agronomist

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

STAND (% of target): 113

YIELD: Average (bu/a): 252

Range (bu/a): 206 - 308

LSD (bu/a): 18

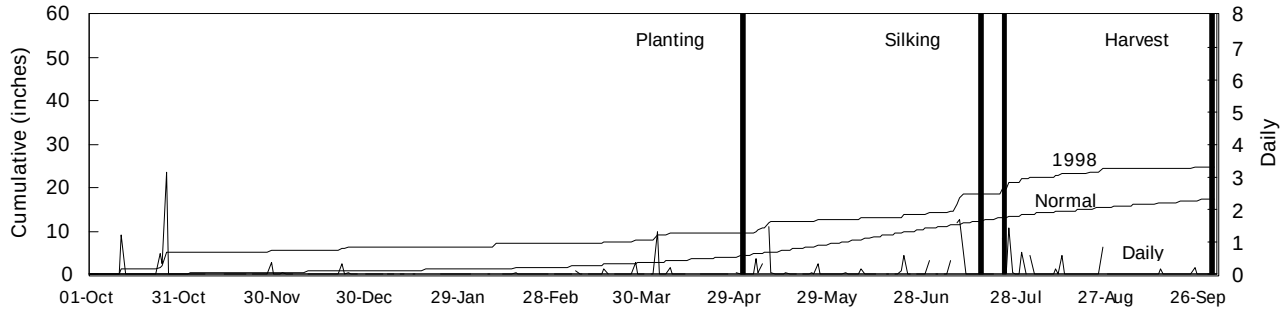
CV (%): 6

SILK DATES: 7/13/98 - 7/24/98

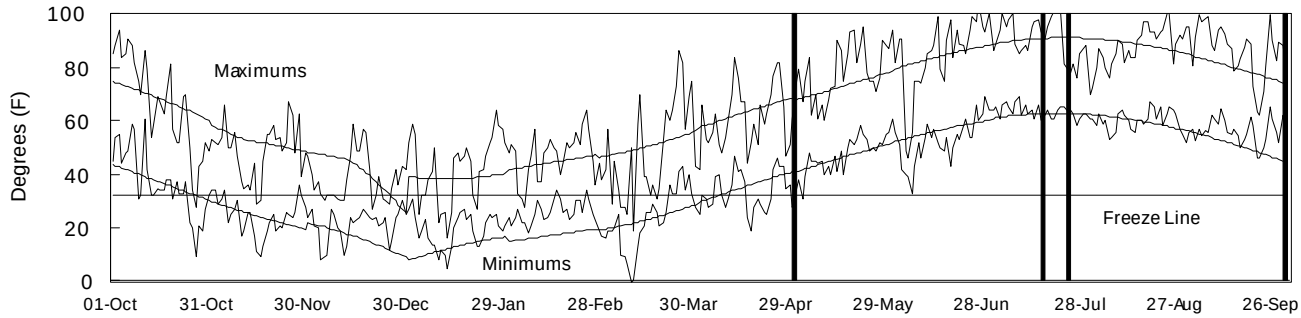
1998 GROWING CONDITONS:

Excellent conditions from planting through harvest resulted in outstanding yields. Insecticide applications in late July and August appeared to control spider mites and corn borers, which caused little damage or yield reduction.

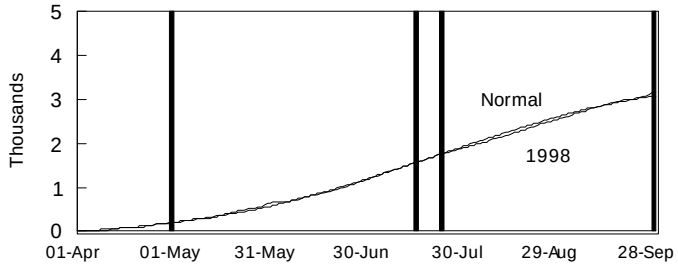
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	1.7	1.5	48	50	191	209
May	3.1	2.9	63	60	431	353
June	1.5	3.6	69	71	554	631
July	7.9	3.1	77	77	758	775
August	2.4	2.0	74	74	667	683
Sept.	0.5	1.6	71	65	579	466
Season Totals	16.9	14.6	67	66	3179	3116

TABLE 18. THOMAS CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
AGRIPRO	AP 9489	206	221	--	214	--	82	94	--	74	17	74	17	114	0	60
MATURITY CHECK	SHORT - C4111	222	209	--	216	--	88	89	--	76	15	76	15	115	5	60
STAUFFER	2625	218	221	--	220	--	86	94	--	77	17	76	16	111	0	58
MIDLAND	764	262	--	--	--	--	104	--	--	--	--	76	18	114	0	58
MSG (OHLDE)	G 7711	246	251	232	249	243	98	106	102	76	19	76	18	115	0	57
NC+	4880	245	249	--	247	--	97	106	--	76	19	76	18	114	0	57
GARST	8546	235	--	--	--	--	93	--	--	--	--	76	19	114	1	57
GARST	8464	238	239	--	238	--	94	101	--	77	20	76	19	115	0	56
HAWKEYE	SX55	247	243	239	245	243	98	103	105	77	19	76	19	115	1	57
MILLER PREF.	MP-1123	240	218	240	229	233	95	92	106	77	20	76	19	115	1	57
OTTILIE	2467	234	239	245	237	240	93	101	108	77	19	76	19	115	1	58
PFISTER	2680	240	--	--	--	--	95	--	--	--	--	76	19	115	1	57
TRIUMPH	1141	250	242	--	246	--	99	103	--	77	19	76	19	115	0	57
DEKALB	DK595BtX	228	--	--	--	--	90	--	--	--	--	77	17	114	0	57
AGRIPRO	AP 9565	259	241	224	250	241	103	102	99	77	19	77	18	115	0	57
ASGROW	RX730	235	--	--	--	--	93	--	--	--	--	77	19	111	1	57
HPH	KS 5119	234	240	--	237	--	93	102	--	77	19	77	19	112	1	56
LG SEEDS	LG2579	248	251	243	249	247	98	106	107	77	19	77	19	115	1	57
MYCOGEN	2725	253	241	225	247	240	100	102	99	77	19	77	19	115	0	57
DEKALB	DK580BtY	247	--	--	--	--	98	--	--	--	--	78	17	112	1	57
MYCOGEN	2722	260	--	--	--	--	103	--	--	--	--	78	17	116	0	57
HAWKEYE	SX44A	267	236	--	251	--	106	100	--	77	18	78	18	115	0	57
KAYSTAR	KX - 777	236	230	232	233	233	94	97	102	78	19	78	18	110	2	57
MSG (OHLDE)	G 7636	246	--	--	--	--	98	--	--	--	--	78	18	112	2	57
STAUFFER	2436	256	233	221	245	237	102	99	97	77	18	78	18	113	0	57
CARGILL	6888	248	254	--	251	--	98	107	--	78	19	78	19	110	0	57
MYCOGEN	7250	261	241	230	251	244	104	102	101	79	20	78	19	115	0	57
LG SEEDS	LG2616	245	--	--	--	--	97	--	--	--	--	78	20	115	0	54
HAWKEYE	SX76	266	--	--	--	--	106	--	--	--	--	78	21	112	1	55
GARST	8543IT	240	237	--	238	--	95	100	--	79	19	79	18	113	6	56
DEKALB	DK632	261	250	--	255	--	103	106	--	79	20	79	19	114	0	57
NK	N7070BT	258	--	--	--	--	102	--	--	--	--	79	19	114	1	56
PIONEER	33A14	263	--	--	--	--	104	--	--	--	--	79	19	115	7	58
NK	N7639BT	264	--	--	--	--	105	--	--	--	--	79	20	112	1	56
NK	N7333BT	233	--	--	--	--	92	--	--	--	--	79	20	113	2	57
OTTILIE	5480	280	--	--	--	--	111	--	--	--	--	79	21	114	0	55
OTTILIE	5233	247	--	--	--	--	98	--	--	--	--	80	17	114	2	59

(continued)

TABLE 18. THOMAS CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
KAYSTAR	KX - 808	240	222	--	231	--	95	94	--	80	19	80	18	114	3	55
MATURITY CHECK	MID-H-2530	211	235	219	223	222	84	100	97	80	18	80	18	114	3	56
TRIUMPH	1514	250	--	--	--	--	99	--	--	--	--	80	19	108	5	56
HPH	KS 5141	263	--	--	--	--	104	--	--	--	--	80	20	114	6	57
MILLER PREF.	MP-1155	284	--	--	--	--	113	--	--	--	--	80	20	115	5	57
OTTILIE	5460	271	261	242	266	258	108	110	107	79	21	80	20	114	5	57
MATURITY CHECK	PIONEER 3162	238	243	241	241	241	94	103	106	80	23	80	22	112	2	56
PFISTER	3977	277	--	--	--	--	110	--	--	--	--	80	23	113	4	54
PIONEER	33H67	290	--	--	--	--	115	--	--	--	--	81	18	114	14	60
CARGILL	7770	244	259	240	251	248	97	109	106	80	20	81	19	115	13	57
HPH	KS 1155	227	--	--	--	--	90	--	--	--	--	81	19	109	0	56
NC+	5445	240	--	--	--	--	95	--	--	--	--	81	19	114	2	56
ASGROW	RX799Bt	241	--	--	--	--	95	--	--	--	--	81	20	106	10	56
MIDLAND	786	305	--	--	--	--	121	--	--	--	--	81	21	114	1	54
PIONEER	32J55	308	272	--	290	--	122	115	--	81	23	81	22	115	8	58
AGRIPRO	AP 619	254	--	--	--	--	101	--	--	--	--	82	19	115	0	56
LG SEEDS	LG2624	250	236	--	243	--	99	100	--	81	20	82	19	110	5	54
OTTILIE	5550	270	242	236	256	249	107	102	104	80	18	82	19	116	9	55
PFISTER	3049	262	--	--	--	--	104	--	--	--	--	82	19	113	5	55
ASGROW	RX813	232	--	--	--	--	92	--	--	--	--	82	20	107	12	55
HPH	KS 2186	225	232	--	229	--	89	98	--	81	21	82	20	114	9	56
LG SEEDS	LG2637	248	--	--	--	--	98	--	--	--	--	82	20	114	8	56
MIDLAND	774	268	--	--	--	--	106	--	--	--	--	82	20	115	8	54
MILLER PREF.	MP-1133	271	233	--	252	--	107	99	--	81	20	82	20	115	8	54
MSG (OHLDE)	G 8699	255	248	--	251	--	101	105	--	82	21	82	20	113	10	56
CARGILL	8412	295	--	--	--	--	117	--	--	--	--	82	21	114	7	56
PREMIUM	P267A	249	--	--	--	--	99	--	--	--	--	82	21	111	4	55
PIONEER	31A12	288	--	--	--	--	114	--	--	--	--	82	23	113	3	54
MIDLAND	798	303	--	--	--	--	120	--	--	--	--	83	21	110	12	56
ASGROW	XP8897	259	--	--	--	--	103	--	--	--	--	83	22	115	1	55
MIDLAND	709	216	--	--	--	--	86	--	--	--	--	84	22	114	2	53
AVERAGES		252	236	226	244	238	252	236	226	79	19	79	19	113	3	56
CV(%)		6	7	5	--	--	6	7	5	--	--	1	3	4	121	1
LSD(0.05)**		18	19	15	--	--	7	8	6	--	--	1	1	NS	5	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, IRRIGATED

COUNTY: GREELEY

LOCATION: Southwest Research-Extension Center, Tribune

TEST SITE: Ulysses silt loam

1997CROP: Wheat

1996 CROP: Fallow

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

PLANTING DATE: 4/30/98

HARVEST DATE: 9/28/98

COOPERATORS:

Alan Schlegel, agronomist; David Frickel, research associate

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

STAND (% of target): 112

YIELD: Average (bu/a): 232

Range (bu/a): 203 - 273

LSD (bu/a): 24

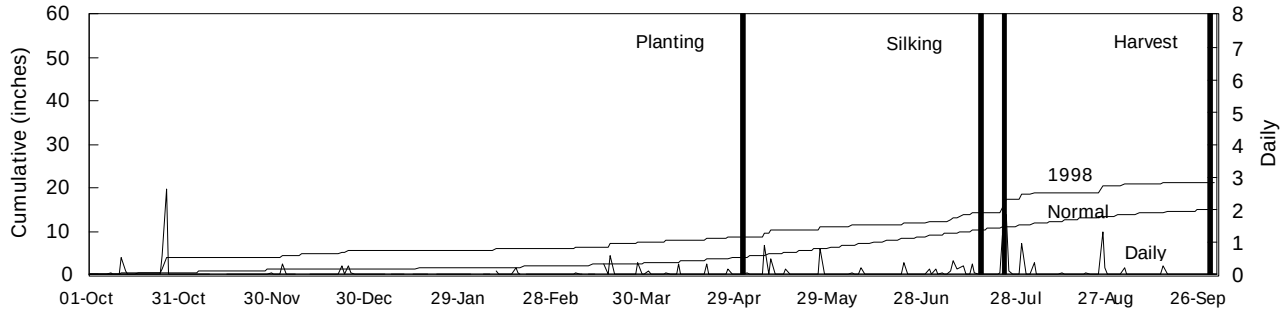
CV (%): 8

SILK DATES: 7/16/98 - 7/24/98

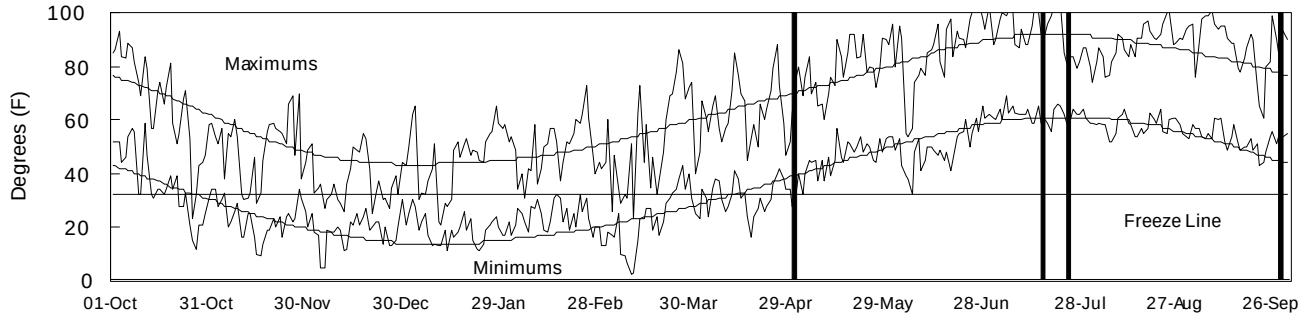
1998 GROWING CONDITONS:

Good soil moisture and timely precipitation produced excellent stands. During the 11-day silking period, July 14 - July 25, temperatures were 100F or above on 5 days and between 90 and 99F on 4 days. Insects and diseases caused no significant problems.

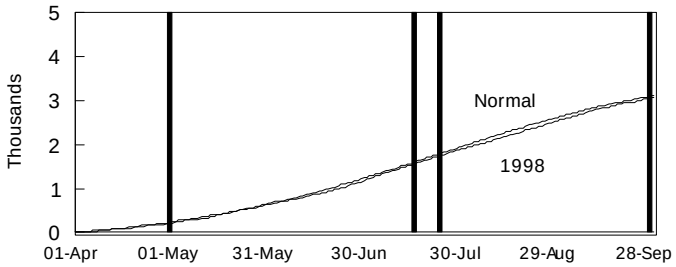
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	1.0	1.4	47	50	212	242
May	2.5	2.3	63	60	440	381
June	0.9	2.6	68	71	533	619
July	6.3	2.5	77	76	746	746
August	2.2	2.1	74	74	639	668
Sept.	0.5	1.3	70	65	547	490
Season Totals	13.5	12.3	67	66	3117	3144

TABLE 19. GREELEY CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	209	175	--	192	--	90	85	--	78	15	77	16	122	1	57
WILSON	E6013	223	--	--	--	--	96	--	--	--	--	77	20	117	0	56
HPH	KS 5119	225	223	--	224	--	97	109	--	77	19	77	21	113	1	53
LG SEEDS	LG2579	248	--	--	--	--	107	--	--	--	--	77	21	118	1	53
NC+	4880	240	--	--	--	--	104	--	--	--	--	77	21	110	0	53
OTTILIE	2467	230	218	--	224	--	99	106	--	78	19	77	21	114	1	53
WILSON	1664	242	220	208	231	223	104	107	104	78	19	77	21	111	0	53
PFISTER	3034	203	--	--	--	--	88	--	--	--	--	77	22	108	2	52
PIONEER	34K77	216	203	--	209	--	93	99	--	80	18	78	19	116	0	54
MILLER PREF.	MP-1131	221	211	183	216	205	95	103	91	79	18	78	20	108	3	54
MYCOGEN	2725	232	202	185	217	206	100	99	92	78	19	78	20	114	2	54
AGRIPRO	AP 9565	234	204	--	219	--	101	99	--	78	19	78	21	114	0	53
CARGILL	6888	229	212	206	220	216	99	103	103	80	19	78	21	114	1	53
MILLER PREF.	MP-1123	228	197	--	212	--	98	96	--	79	19	78	21	116	3	53
MYCOGEN	2722	218	--	--	--	--	94	--	--	--	--	79	19	110	1	54
WILSON	E3034	214	--	--	--	--	92	--	--	--	--	79	19	107	0	53
DEKALB	DK595BtX	226	--	--	--	--	98	--	--	--	--	79	20	119	1	54
MILLER PREF.	MP-1112	224	--	--	--	--	97	--	--	--	--	79	20	110	0	53
NK	NX6567	219	--	--	--	--	94	--	--	--	--	79	20	111	0	54
GARST	8543IT	227	212	--	219	--	98	103	--	80	19	79	22	106	2	53
MYCOGEN	7250	246	219	207	232	224	106	107	103	80	20	79	22	108	0	52
NK	N7070BT	250	--	--	--	--	108	--	--	--	--	79	22	115	1	52
MIDLAND	764	247	--	--	--	--	107	--	--	--	--	79	23	115	0	52
TRIUMPH	1141	207	--	--	--	--	89	--	--	--	--	79	23	106	1	52
LG SEEDS	LG2616	249	--	--	--	--	107	--	--	--	--	79	24	113	2	51
OTTILIE	5480	247	--	--	--	--	107	--	--	--	--	79	24	112	2	51
NK	NX6236	214	--	--	--	--	92	--	--	--	--	80	20	117	1	54
MATURITY CHECK	MID-H-2530	223	205	200	214	209	96	100	99	81	19	80	22	108	1	52
PIONEER	33A14	267	--	--	--	--	115	--	--	--	--	80	22	115	0	53
DEKALB	DK632	226	--	--	--	--	98	--	--	--	--	80	23	113	0	53
MILLER PREF.	MP-1155	260	--	--	--	--	112	--	--	--	--	80	24	112	5	53
OTTILIE	5460	258	--	--	--	--	112	--	--	--	--	80	24	109	7	52
PFISTER	3977	233	--	--	--	--	100	--	--	--	--	80	28	112	5	51
OTTILIE	5233	233	--	--	--	--	101	--	--	--	--	81	21	106	4	55

(continued)

TABLE 19. GREELEY CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
AGRIPRO	AP 619	207	--	--	--	--	89	--	--	--	--	81	23	114	1	52
GARST	8366	220	222	--	221	--	95	108	--	82	20	81	23	112	2	51
CARGILL	7770	258	216	214	237	229	111	105	107	82	21	81	24	116	3	52
HPH	KS 5141	247	--	--	--	--	107	--	--	--	--	81	24	113	3	53
KAYSTAR	KX - 909	244	--	217	--	--	105	--	108	--	--	81	25	113	1	50
MILLER PREF.	MP-1133	229	206	--	218	--	99	100	--	82	22	81	25	109	0	50
MATURITY CHECK	PIONEER 3162	233	217	216	225	222	101	106	108	82	23	81	28	117	2	53
DEKALB	DK641	250	212	--	231	--	108	103	--	83	21	82	23	118	6	53
HPH	KS 1155	212	--	--	--	--	92	--	--	--	--	82	24	106	0	52
HPH	KS 2186	224	228	--	226	--	97	111	--	83	22	82	25	108	1	52
MIDLAND	774	219	--	--	--	--	94	--	--	--	--	82	25	109	2	50
NC+	5445	237	--	--	--	--	102	--	--	--	--	82	25	115	0	52
OTTILIE	5550	223	205	--	214	--	96	100	--	81	21	82	25	110	0	50
NC+	5018	250	--	--	--	--	108	--	--	--	--	83	21	111	0	52
LG SEEDS	LG2587	218	--	--	--	--	94	--	--	--	--	83	22	107	14	53
PIONEER	32J55	273	245	--	259	--	118	120	--	83	23	83	27	118	1	54
CARGILL	8412	239	--	--	--	--	103	--	--	--	--	84	25	108	7	53
PFISTER	3810	240	--	--	--	--	103	--	--	--	--	84	25	111	2	53
MIDLAND	786	218	--	--	--	--	94	--	--	--	--	84	26	105	3	50
MIDLAND	798	229	--	--	--	--	99	--	--	--	--	84	26	113	8	53
MIDLAND	709	204	--	--	--	--	88	--	--	--	--	85	28	114	4	51
AVERAGES		232	205	201	218	213	232	205	201	81	20	80	23	112	2	53
CV(%)		8	8	7	--	--	8	8	7	--	--	1	4	5	153	1
LSD(0.05)**		24	19	15	--	--	10	9	8	--	--	2	1	NS	4	1

** 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

1997CROP: Soybeans

1996 CROP: Corn

FERTILIZER (lbs/acre): 200 N 0 P_2O_5 0 K_2O

PLANTING DATE: 4/27/98

HARVEST DATE: 10/6/98

COOPERATORS:

Merle Witt, agronomist

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

STAND (% of target): 104

YIELD: Average (bu/a): 180

Range (bu/a): 136 - 223

LSD (bu/a): 23

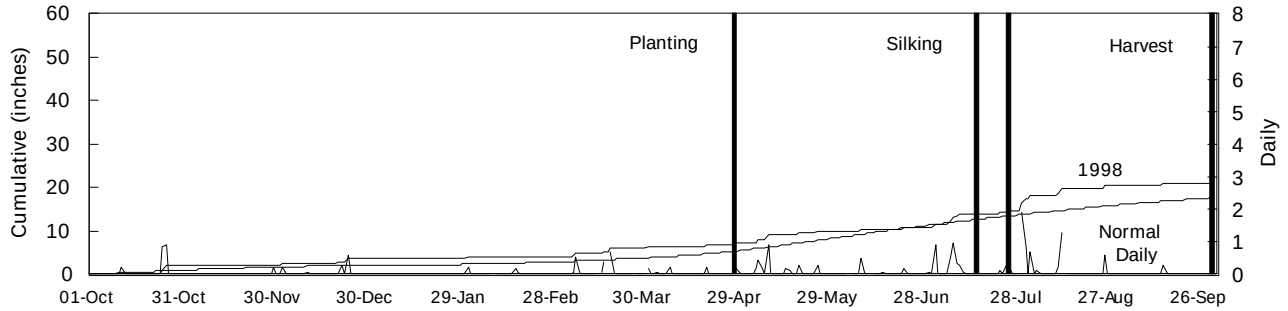
CV (%): 10

SILK DATES: 7/15/98 - 7/25/98

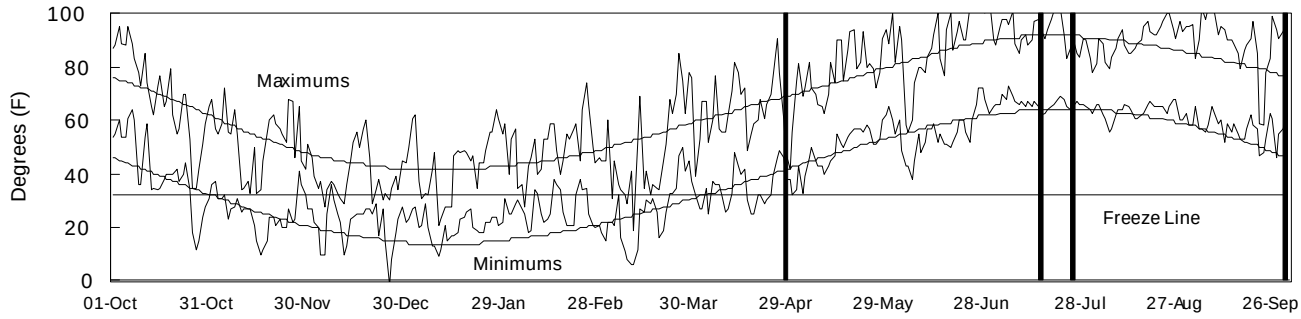
1998 GROWING CONDITONS:

Above-normal temperatures in May and June hastened early plant growth. Conditions were relatively cool and wet during pollination and early grain fill. Southwestern and European corn borer populations were below economic treatment levels, so no insecticide was applied. However, borer damage appeared to reduce yields of nonresistant hybrids.

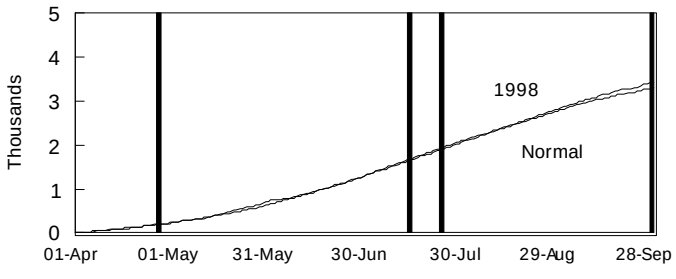
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

	Precipitation		Average Temp.		GDD	
Month	1998	Normal	1998	Normal	1998	Normal
April	0.9	1.8	49	51	225	234
May	2.7	2.8	66	62	481	393
June	0.9	3.0	72	72	594	673
July	6.6	2.5	79	78	825	795
August	3.1	2.1	77	75	729	715
Sept.	0.3	1.6	73	67	612	514
Season Totals	14.5	13.8	69	68	3465	3323

TABLE 20. FINNEY CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MIDLAND	764	172	--	--	--	--	96	--	--	--	--	79	16	109	2	
MATURITY CHECK	SHORT - C4111	146	176	--	161	--	81	80	--	75	13	80	14	107	9	
KAYSTAR	KX - 777	157	211	187	184	185	87	96	105	75	15	80	16	108	13	
MILLER PREF.	MP-1123	168	211	--	190	--	93	96	--	75	15	80	16	104	13	
MSG (OHLDE)	G 7711	167	--	182	--	--	93	--	102	--	--	80	17	103	5	
DEKALB	DK632	183	--	--	--	--	102	--	--	--	--	81	16	107	9	
HPH	KS 5119	181	218	181	200	194	101	99	102	76	15	81	16	106	5	
NK	N7590BT	223	--	--	--	--	124	--	--	--	--	81	16	105	0	
PIONEER	33A14	206	--	--	--	--	115	--	--	--	--	81	16	107	1	
CARGILL	6888	159	226	183	192	189	88	102	103	76	16	81	17	102	6	
MYCOGEN	2725	173	217	--	195	--	96	98	--	76	16	81	17	107	3	
NC+	4880	185	--	--	--	--	103	--	--	--	--	81	17	104	9	
OTTILIE	2467	180	--	169	--	--	100	--	95	--	--	81	17	103	4	
AGRIPRO	AP 9565	165	217	178	191	187	91	98	100	75	16	81	18	109	2	
HOEGEMEYER	2666	165	216	--	191	--	92	98	--	76	16	81	18	101	3	
HOEGEMEYER	2645	152	--	--	--	--	84	--	--	--	--	82	15	103	25	
AGRIPRO	AP 9520	154	--	--	--	--	85	--	--	--	--	82	16	106	6	
MATURITY CHECK	MID-H-2530	180	206	188	193	192	100	93	106	77	15	82	16	105	3	
MILLER PREF.	MP-1155	210	--	--	--	--	116	--	--	--	--	82	16	105	10	
NK	N7333BT	218	--	--	--	--	121	--	--	--	--	82	16	105	0	
TRIUMPH	1522	209	--	164	--	--	116	--	92	--	--	82	16	103	20	
MYCOGEN	7250	160	208	169	184	179	89	94	95	77	16	82	17	101	10	
NK	N7639BT	208	--	--	--	--	115	--	--	--	--	82	17	109	0	
OTTILIE	5460	185	235	158	210	193	103	106	89	78	16	82	17	93	10	
MATURITY CHECK	PIONEER 3162	163	228	163	196	185	90	103	92	77	17	82	18	101	5	
CARGILL	7770	198	219	181	208	199	110	99	102	78	16	83	17	109	5	
NK	N79-L3	185	--	--	--	--	103	--	--	--	--	83	17	107	3	
DEKALB	DK641	190	218	181	204	196	105	98	102	78	16	83	18	108	11	
HPH	KS 5141	186	--	--	--	--	103	--	--	--	--	83	18	108	11	
PFISTER	3977	176	--	--	--	--	98	--	--	--	--	83	18	102	7	
KAYSTAR	KX - 808	154	205	--	180	--	86	93	--	79	16	84	16	104	16	
NC+	5445	169	--	--	--	--	94	--	--	--	--	84	16	104	5	
PIONEER	33H67	205	--	--	--	--	114	--	--	--	--	84	16	109	19	
TRIUMPH	1514	151	226	190	189	189	84	102	107	80	16	84	16	101	2	
GARST	8366	154	229	--	192	--	86	104	--	79	16	84	17	96	4	
HOEGEMEYER	2682	180	210	--	195	--	100	95	--	79	16	84	17	104	16	
KAYSTAR	KX - 909	172	--	190	--	--	95	--	107	--	--	84	17	108	23	
PIONEER	31A12	206	--	--	--	--	115	--	--	--	--	84	17	105	4	

(continued)

TABLE 20. FINNEY CO. IRRIGATED CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
GARST	8222IT	194	--	--	--	--	108	--	--	--	--	84	18	101	14	
OTTILIE	5606X	165	--	--	--	--	92	--	--	--	--	84	20	109	12	
NC+	5018	189	--	--	--	--	105	--	--	--	--	85	16	99	6	
AGRIPRO	AP 619	156	212	182	184	183	86	96	102	80	17	85	17	105	2	
MSG (OHLDE)	G 8511	160	229	164	194	184	89	104	92	80	17	85	17	100	12	
NK	4662	207	--	159	--	--	115	--	89	--	--	85	17	107	9	
OTTILIE	5550	174	203	159	188	178	96	92	90	78	16	85	17	100	6	
PIONEER	32J55	209	246	--	228	--	116	112	--	80	17	85	17	107	5	
STAUFFER	2792	154	221	--	187	--	85	100	--	80	16	85	17	97	3	
HPH	KS 2186	184	238	177	211	200	102	108	99	79	17	85	18	106	5	
LG SEEDS	LG2694	186	--	--	--	--	103	--	--	--	--	85	18	99	28	
MIDLAND	798	201	--	--	--	--	112	--	--	--	--	85	18	102	8	
TRIUMPH	1866	197	--	--	--	--	109	--	--	--	--	85	18	103	9	
HPH	KS 1155	136	--	--	--	--	76	--	--	--	--	85	19	107	5	
MSG (OHLDE)	G 8771	197	231	164	214	197	109	105	92	81	16	86	16	104	9	
MIDLAND	709	191	--	--	--	--	106	--	--	--	--	86	17	99	3	
MIDLAND	774	155	211	--	183	--	86	96	--	81	16	86	17	103	10	
MIDLAND	786	204	239	--	221	--	113	108	--	81	16	86	17	107	10	
STAUFFER	2820	145	214	--	179	--	80	97	--	80	16	86	17	105	7	
AGRIPRO	AP 9828	199	--	--	--	--	111	--	--	--	--	86	18	106	12	
CARGILL	8412	183	--	--	--	--	102	--	--	--	--	86	18	107	5	
DELANGE	DS 1997	187	--	--	--	--	104	--	--	--	--	86	18	102	9	
LG SEEDS	LG2726	194	228	--	211	--	108	103	--	81	18	86	18	102	10	
MILLER PREF.	MP-1133	171	211	--	191	--	95	95	--	81	17	86	18	106	7	
MYCOGEN	2888	201	--	--	--	--	112	--	--	--	--	86	19	107	12	
CARGILL	8011	156	229	--	192	--	87	104	--	81	16	87	17	105	6	
GARST	8285	177	227	196	202	200	98	103	110	82	17	87	18	102	12	
WILSON	2330	206	262	201	234	223	114	119	113	82	18	87	18	106	8	
WILSON	E975307	193	241	--	217	--	107	109	--	83	18	88	19	107	9	
WILSON	2335	179	226	202	203	202	99	102	114	83	18	89	19	109	4	
AVERAGES		180	221	178	200	193	180	221	178	79	16	84	17	104	8	
CV(%)		10	5	7	--	--	10	5	7	--	--	1	6	4	81	
LSD(0.05)**		23	15	18	--	--	13	7	10	--	--	1	1	6	11	

** 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, 1996-1998.

			1998 YIELD AS % OF TEST AVERAGE[1]					1996-1998		
	BRAND	NAME	STA	THI	GRI	FIN	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
	PIONEER	32J55	102	122	118	116	114	40.45 *	6.26	8
	MIDLAND	786	107	121	94	113	109	32.21 *	10.98	6
	WILSON	2330	106	--	--	114	--	28.67 *	4.29	6
	PIONEER	3237	113	--	--	--	--	22.59 *	6.24	6
	MSG (OHLDE)	G 8699	111	101	--	--	--	19.26 *	5.76	5
	OTTILIE	5460	--	108	112	103	--	17.65 *	6.83	7
	WILSON	2335	100	--	--	99	--	15.24	6.39	6
	PIONEER	32K61	87	--	--	--	--	15.14	8.1	5
	DEKALB	DK632	99	103	98	102	100	14.33	5.51	5
	MSG (OHLDE)	G 8771	96	--	--	109	--	12.33 *	4.18	7
	NC+	5445	104	95	102	94	99	11.8 *	3.37	6
	CARGILL	7770	--	97	111	110	--	11.03 *	3.14	11
	MILLER PREF.	MP-1133	100	107	99	95	100	9.32	6.42	8
	KAYSTAR	KX - 909	--	--	105	95	--	8.86 *	3.28	6
	NK	4662	--	--	--	115	--	8.28	8.09	5
	TRIUMPH	1514	94	99	--	84	--	8.21	4.87	8
	DEKALB	DK641	--	--	108	105	--	7.42	3.32	7
	MSG (OHLDE)	G 7711	--	98	--	93	--	7.33 *	2.94	7
	HPH	KS 2186	98	89	97	102	97	7.2	3.13	9
	AGRIPRO	AP 619	101	101	89	86	94	7.15	6.4	8
	MIDLAND	774	96	106	94	86	96	6.02	8.21	6
	MSG (OHLDE)	G 8511	91	--	--	89	--	5.43	5.36	8
	CARGILL	6888	91	98	99	88	94	5.17	3	10
	OTTILIE	2467	--	93	99	100	--	4.98	2.49	7
	AGRIPRO	AP 9565	91	103	101	91	96	4.8	3.75	11
	HPH	KS 5119	87	93	97	101	94	3.04	2.09	9
c	MATURITY CHECK	PIONEER 3162	90	94	101	90	94	2.92	2.29	12
	MYCOGEN	7250	--	104	106	89	--	2.6	4.5	10
	MILLER PREF.	MP-1123	95	95	98	93	95	1.75	4.77	9
	OTTILIE	5550	--	107	96	96	--	1.72	6.37	8
	GARST	8366	100	--	95	86	--	1.19	4.45	7
	KAYSTAR	KX - 777	--	94	--	87	--	0.04	3.8	10
	MYCOGEN	2725	--	100	100	96	--	-0.2	4.69	8
c	MATURITY CHECK	MID-H-2530	93	84	96	100	93	-2.93	2.29	12
	KAYSTAR	KX - 808	--	95	--	86	--	-4.05	6.03	6
	CARGILL	8011	--	--	--	87	--	-7.98	5.22	5
	MILLER PREF.	MP-1131	--	--	95	--	--	-8.14	4.29	5
	MATURITY CHECK	SHORT - C4111	84	88	90	81	86	-26.1 *	4.48	8
	AGRIPRO	AP 9489	--	82	--	--	--	--	--	--
	AGRIPRO	AP 9520	101	--	--	85	--	--	--	--
	AGRIPRO	AP 9828	--	--	--	111	--	--	--	--
	ASGROW	RX730	92	93	--	--	--	--	--	--
	ASGROW	RX799Bt	91	95	--	--	--	--	--	--
	ASGROW	RX813	103	92	--	--	--	--	--	--
	ASGROW	XP8897	108	103	--	--	--	--	--	--

(continued)

TABLE 21. WESTERN KANSAS IRRIGATED CORN TEST YIELD SUMMARY, 1996-1998.

		1998 YIELD AS % OF TEST AVERAGE[1]					1996-1998		
BRAND	NAME	STA	THI	GRI	FIN	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
CARGILL	8412	104	117	103	102	106	--	--	--
DEKALB	DK580BtY	--	98	--	--	--	--	--	--
DEKALB	DK595BtX	--	90	98	--	--	--	--	--
DEKALB	DK679	109	--	--	--	--	--	--	--
DEKALB	DK687	99	--	--	--	--	--	--	--
DELANGE	DS 1997	105	--	--	104	--	--	--	--
GARST	8222IT	96	--	--	108	--	--	--	--
GARST	8285	--	--	--	98	--	--	--	--
GARST	8342	104	--	--	--	--	--	--	--
GARST	8464	--	94	--	--	--	--	--	--
GARST	8543IT	--	95	98	--	--	--	--	--
GARST	8546	--	93	--	--	--	--	--	--
GOLDEN HARVEST	H-2643IMI	100	--	--	--	--	--	--	--
HAWKEYE	SX44A	--	106	--	--	--	--	--	--
HAWKEYE	SX55	--	98	--	--	--	--	--	--
HAWKEYE	SX76	--	106	--	--	--	--	--	--
HOEGEMEYER	2645	--	--	--	84	--	--	--	--
HOEGEMEYER	2666	97	--	--	92	--	--	--	--
HOEGEMEYER	2682	--	--	--	100	--	--	--	--
HOEGEMEYER	2761	98	--	--	--	--	--	--	--
HOEGEMEYER	683 IMI	104	--	--	--	--	--	--	--
HPH	KS 1155	103	90	92	76	90	--	--	--
HPH	KS 5141	104	104	107	103	105	--	--	--
LG SEEDS	LG2579	--	98	107	--	--	--	--	--
LG SEEDS	LG2587	--	--	94	--	--	--	--	--
LG SEEDS	LG2616	--	97	107	--	--	--	--	--
LG SEEDS	LG2624	--	99	--	--	--	--	--	--
LG SEEDS	LG2637	--	98	--	--	--	--	--	--
LG SEEDS	LG2694	--	--	--	103	--	--	--	--
LG SEEDS	LG2726	--	--	--	108	--	--	--	--
MIDLAND	764	90	104	107	96	99	--	--	--
MIDLAND	709	102	86	88	106	95	--	--	--
MIDLAND	798	99	120	99	112	107	--	--	--
MILLER PREF.	MP-1112	--	--	97	--	--	--	--	--
MILLER PREF.	MP-1155	106	113	112	116	112	--	--	--
MSG (OHLDE)	G 7636	--	98	--	--	--	--	--	--
MYCOGEN	2722	--	103	94	--	--	--	--	--
MYCOGEN	2888	115	--	--	112	--	--	--	--
MYCOGEN	8460	99	--	--	--	--	--	--	--
NC+	4880	--	97	104	103	--	--	--	--
NC+	5018	--	--	108	105	--	--	--	--
NC+	6868	111	--	--	--	--	--	--	--
NC+	7117	92	--	--	--	--	--	--	--
NK	N7070BT	--	102	108	--	--	--	--	--
NK	N7333BT	--	92	--	121	--	--	--	--

(continued)

TABLE 21. WESTERN KANSAS IRRIGATED CORN TEST YIELD SUMMARY, 1996-1998.

		1998 YIELD AS % OF TEST AVERAGE[1]					1996-1998		
BRAND	NAME	STA	THI	GRI	FIN	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
NK	N7590BT	116	--	--	124	--	--	--	--
NK	N7639BT	112	105	--	115	--	--	--	--
NK	N79-L3	109	--	--	103	--	--	--	--
NK	NX6236	--	--	92	--	--	--	--	--
NK	NX6567	--	--	94	--	--	--	--	--
OTTILIE	5233	--	98	101	--	--	--	--	--
OTTILIE	5480	--	111	107	--	--	--	--	--
OTTILIE	5606X	--	--	--	92	--	--	--	--
PFISTER	2680	--	95	--	--	--	--	--	--
PFISTER	3034	--	--	88	--	--	--	--	--
PFISTER	3049	--	104	--	--	--	--	--	--
PFISTER	3810	--	--	103	--	--	--	--	--
PFISTER	3977	--	110	100	98	--	--	--	--
PIONEER	31A12	102	114	--	115	--	--	--	--
PIONEER	31B13	118	--	--	--	--	--	--	--
PIONEER	33A14	109	104	115	115	111	--	--	--
PIONEER	33H67	--	115	--	114	--	--	--	--
PIONEER	34K77	--	--	93	--	--	--	--	--
PREMIUM	P267A	--	99	--	--	--	--	--	--
STAUFFER	2436	--	102	--	--	--	--	--	--
STAUFFER	2625	--	86	--	--	--	--	--	--
STAUFFER	2792	--	--	--	85	--	--	--	--
STAUFFER	2820	--	--	--	80	--	--	--	--
TERRA	E1128IT	80	--	--	--	--	--	--	--
TERRA	E1148	98	--	--	--	--	--	--	--
TERRA	E1158IT	92	--	--	--	--	--	--	--
TERRA	TR1188	92	--	--	--	--	--	--	--
TERRA	E1178	96	--	--	--	--	--	--	--
TERRA	TR1157	105	--	--	--	--	--	--	--
TRIUMPH	1141	--	99	89	--	--	--	--	--
TRIUMPH	1522	--	--	--	116	--	--	--	--
TRIUMPH	1866	99	--	--	109	--	--	--	--
WILSON	1664	--	--	104	--	--	--	--	--
WILSON	E3034	--	--	92	--	--	--	--	--
WILSON	E6013	--	--	96	--	--	--	--	--
WILSON	E975307	103	--	--	107	--	--	--	--
AVERAGES	(bushels/acre)	197	252	232	180	215	--	--	--
LSD(0.05)**		11	7	10	13	--	--	--	--

[1] STA = 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; FIN = 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.

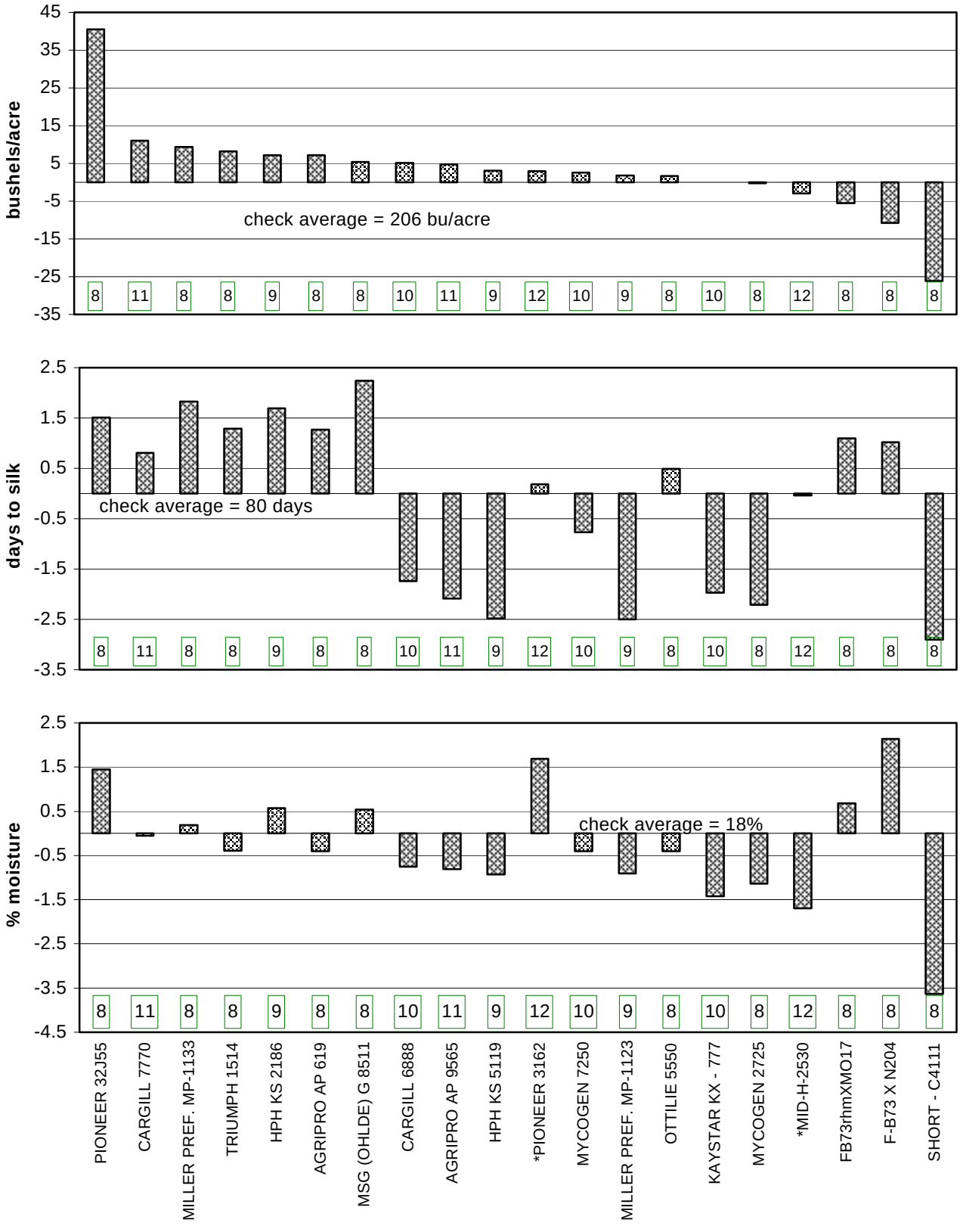
[3] SE = Standard Error of DYA; measure of consistency of yield differences.

[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; each hybrid 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, 1996-1998.



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

EAST CENTRAL KANSAS SHORT-SEASON CORN TEST

COUNTY: FRANKLIN

LOCATION: East Central Kansas Experiment Field, Ottawa

TEST SITE: Woodson silt loam

1997CROP: Soybeans

1996 CROP: Corn

FERTILIZER (lbs/acre): 100 N 34 P_2O_5 11 K_2O

PLANTING DATE: 4/23/98

HARVEST DATE: 10/13/98

COOPERATORS:

Keith Janssen, agronomist; Jim Kimball, technician

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

STAND (% of target): 113

YIELD: Average (bu/a): 116

Range (bu/a): 70 - 134

LSD (bu/a): 12

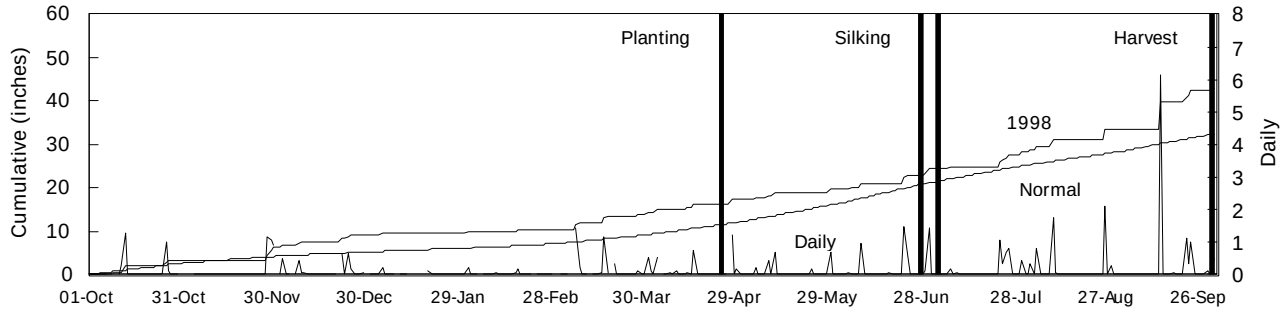
CV (%): 9

SILK DATES: 6/27/98 - 7/2/98

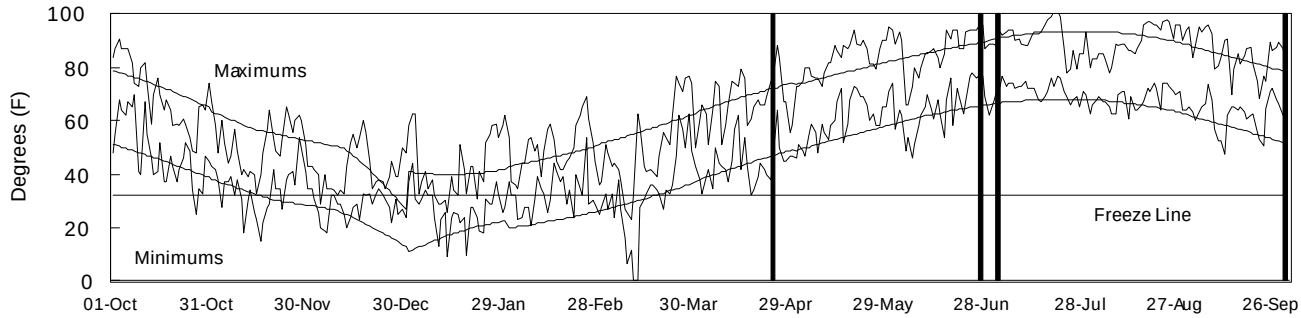
1998 GROWING CONDITONS:

Emergence was favorable, resulting in above-average stand establishment. Dry conditions in May and June slowed early development. Relatively hot summer temperatures combined with below-normal rainfall during critical parts of the season reduced yields.

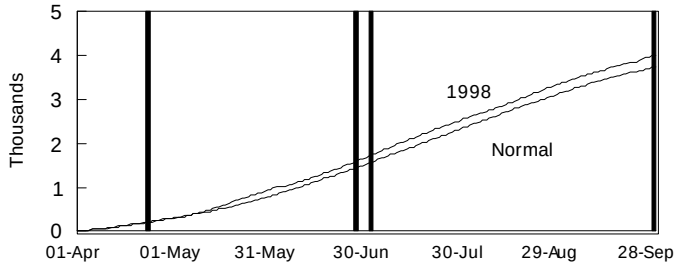
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	3.3	3.0	56	57	294	300
May	2.3	4.1	73	66	653	485
June	4.8	5.0	76	75	745	750
July	3.6	3.9	81	80	896	859
August	5.4	3.1	79	79	801	774
Sept.	9.3	4.1	73	70	668	597
Season Totals	28.6	23.3	73	71	4055	3765

TABLE 22. FRANKLIN CO. SHORT-SEASON CORN PERFORMANCE TEST RESULTS, 1996-98.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stnd %	Ldg %	Test Wt. lb/bu
HOEGEMEYER	2591	82	124	--	103	--	71	96	--	69	15	65	15	115	24	57
MATURITY CHECK	SHORT - C4111	102	113	--	107	--	88	87	--	69	15	65	15	119	21	57
MYCOGEN	2620	114	--	--	--	--	98	--	--	--	--	65	15	118	12	58
NK	N4640BT	124	--	--	--	--	107	--	--	--	--	65	15	119	2	57
DEKALB	DK569	123	139	142	131	135	106	108	102	70	15	66	15	119	4	58
TRIUMPH	8810	132	127	--	129	--	114	98	--	71	14	67	12	117	3	58
NC+	3877	118	--	--	--	--	102	--	--	--	--	67	15	112	5	58
NK	N53-MI	119	--	--	--	--	103	--	--	--	--	67	15	117	5	58
PIONEER	35A19	107	--	--	--	--	93	--	--	--	--	67	15	99	3	59
PIONEER	3563	120	137	--	128	--	103	106	--	71	16	67	15	109	4	59
ASGROW	RX670	122	--	--	--	--	105	--	--	--	--	68	15	113	2	58
DEKALB	DK545BtY	70	--	--	--	--	61	--	--	--	--	68	15	107	34	55
DELANGE	DS 1204	124	123	154	123	133	107	95	110	72	15	68	15	100	5	56
HOEGEMEYER	2623	129	136	--	132	--	111	105	--	72	15	68	15	112	2	57
NC+	4616	133	131	150	132	138	115	101	108	72	16	68	15	116	1	59
PIONEER	35N05	111	--	--	--	--	96	--	--	--	--	68	15	107	2	59
MATURITY CHECK	MID-H-2530	120	129	164	125	138	103	100	118	72	15	69	15	112	4	57
MATURITY CHECK	PIONEER 3162	134	143	--	139	--	116	111	--	73	17	70	16	115	5	60
AVERAGES		116	129	139	122	128	116	129	139	71	15	67	15	113	8	58
CV(%)		9	5	6	--	--	9	5	6	--	--	1	8	9	60	1
LSD(0.05)**		12	8	10	--	--	11	6	8	--	--	1	NS	NS	5	1

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

SOUTHEASTERN KANSAS SHORT-SEASON CORN TEST

COUNTY: LABETTE

LOCATION: Southeast Agricultural Research Center, Parsons

TEST SITE: Parsons silt loam

1997CROP: Wheat

1996 CROP: Soybeans

FERTILIZER (lbs/acre): 128 N 92 P_2O_5 120 K_2O

PLANTING DATE: 4/13/98

HARVEST DATE: 9/2/98

COOPERATORS:

James Long, agronomist

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

STAND (% of target): 101

YIELD: Average (bu/a): 112

Range (bu/a): 91 - 138

LSD (bu/a): 12

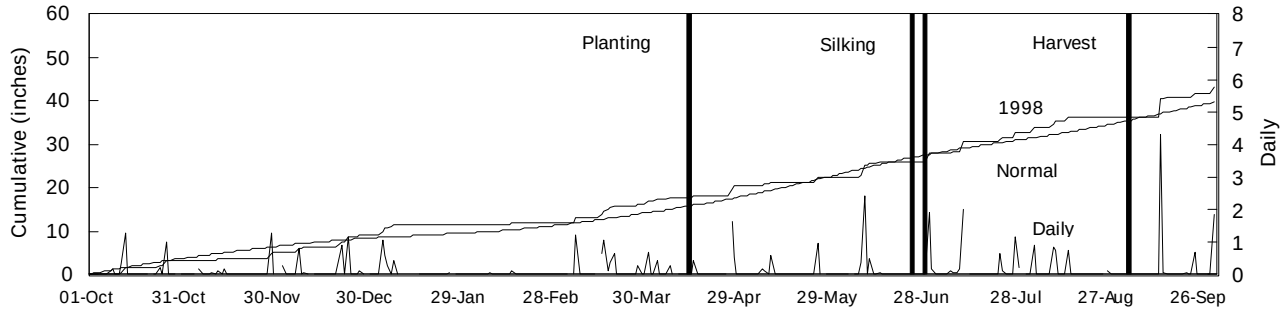
CV (%): 9

SILK DATES: 6/24/98 - 6/28/98

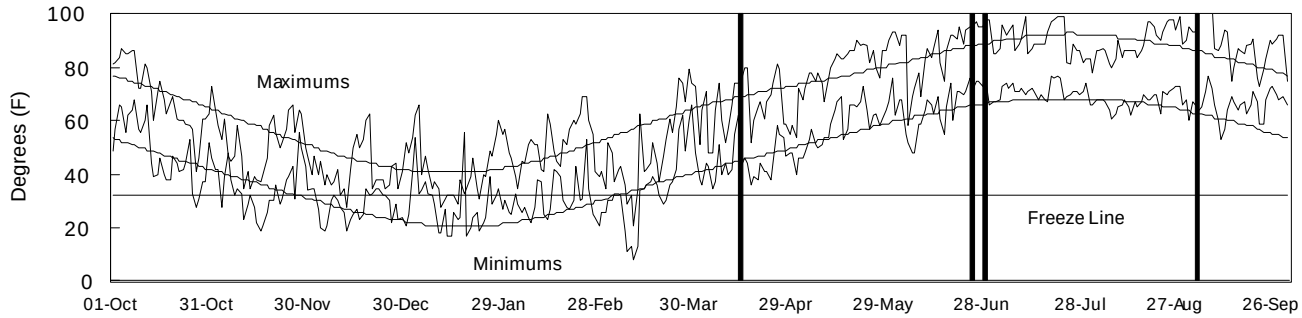
1998 GROWING CONDITONS:

Conditions were excellent for much of the growing season, but some weather events likely limited yields. Hail defoliated 15% - 20% of the leaves just before tasseling in June. Hot, dry conditions in August caused rapid grain fill and maturation.

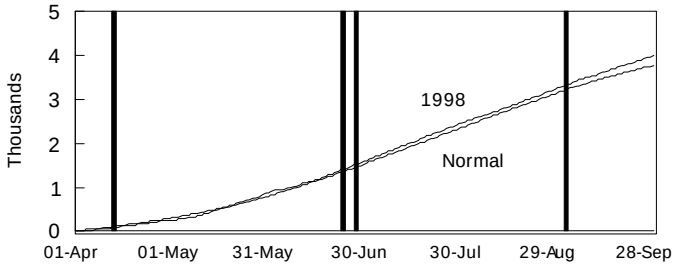
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	3.5	3.9	54	58	244	304
May	1.9	4.9	71	66	610	485
June	5.6	4.9	76	75	747	750
July	4.9	3.5	80	80	895	861
August	3.4	3.8	78	78	790	786
Sept.	7.1	4.5	78	70	752	615
Season Totals	26.4	25.4	73	71	4037	3799

TABLE 23. LABETTE CO. SHORT-SEASON CORN PERFORMANCE TEST RESULTS, 1996-1998.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Ears per Plant	Final Stand %	Test Wt. lb/bu
DEKALB	DK569	109	--	--	--	--	98	--	--	--	--	72	12	1.0	103	59
MATURITY CHECK	SHORT - C4111	92	176	--	134	--	83	102	--	80	15	72	12	1.0	100	60
NK	N4640BT	130	--	--	--	--	116	--	--	--	--	72	12	0.9	110	58
DEKALB	DK527	99	--	96	--	--	88	--	96	--	--	73	12	1.0	95	57
MYCOGEN	2620	91	--	--	--	--	81	--	--	--	--	73	12	1.0	100	61
TERRA	TR1026	93	153	114	123	120	84	89	115	79	14	73	12	1.0	100	59
DEKALB	DK580BtY	120	--	--	--	--	107	--	--	--	--	73	13	1.0	111	60
GARST	8600IT	117	--	--	--	--	105	--	--	--	--	73	13	1.0	105	59
NC+	3877	104	--	--	--	--	93	--	--	--	--	73	13	1.0	97	60
TRIUMPH	8810	114	182	--	148	--	102	105	--	81	15	73	13	1.0	94	58
MATURITY CHECK	MID-H-2530	115	189	100	152	135	103	109	101	82	14	74	12	0.9	97	59
NK	N53-MI	111	--	--	--	--	99	--	--	--	--	74	12	1.0	98	59
GARST	8560	118	170	102	144	130	105	98	103	81	16	74	13	1.0	105	57
PIONEER	35A19	111	--	--	--	--	99	--	--	--	--	74	13	1.0	101	60
PIONEER	35N05	134	--	--	--	--	120	--	--	--	--	74	13	1.0	100	60
PIONEER	3563	107	181	--	144	--	95	104	--	81	15	74	13	0.9	101	60
TERRA	TR1047	106	--	--	--	--	95	--	--	--	--	74	14	1.0	97	57
NC+	4880	117	--	--	--	--	104	--	--	--	--	74	15	1.0	101	58
MATURITY CHECK	PIONEER 3162	138	205	--	171	--	123	118	--	82	19	74	16	1.0	106	61
DELANGE	DS 1204	109	174	93	141	125	97	100	94	81	15	75	13	1.0	103	58
ASGROW	RX670	115	--	--	--	--	103	--	--	--	--	76	14	0.9	103	57
AVERAGES		112	173	99	142	128	112	173	99	80	15	73	13	1.0	101	59
CV(%)		9	7	9	--	--	9	7	9	--	--	1	3	3.1	7	1
LSD(0.05)**		12	10	10	--	--	11	6	10	--	--	1	1	0.0	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

1997CROP: Wheat

1996 CROP: Fallow

FERTILIZER (lbs/acre): 290 N 46 P_2O_5 0 K_2O

PLANTING DATE: 4/21/98

HARVEST DATE: 9/15/98

COOPERATORS:

Victor Martin, agronomist

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

STAND (% of target): 98

YIELD: Average (bu/a): 197

Range (bu/a): 163 - 213

LSD (bu/a): 17

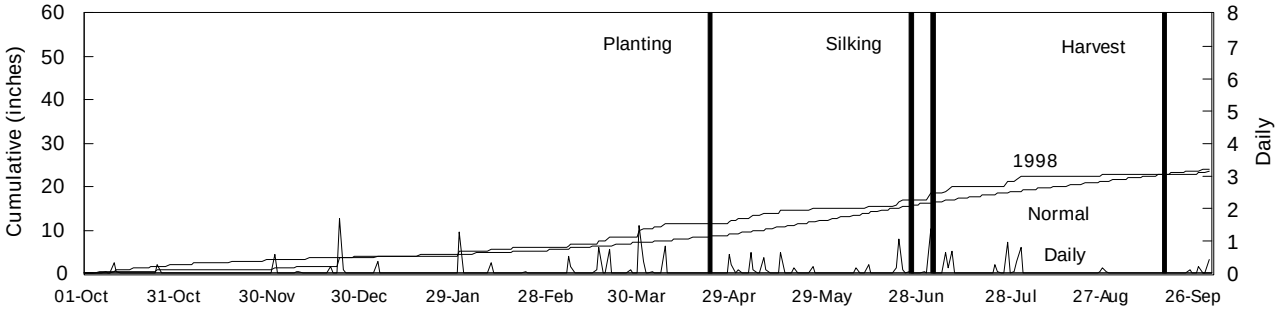
CV (%): 7

SILK DATES: 6/25/98 - 7/2/98

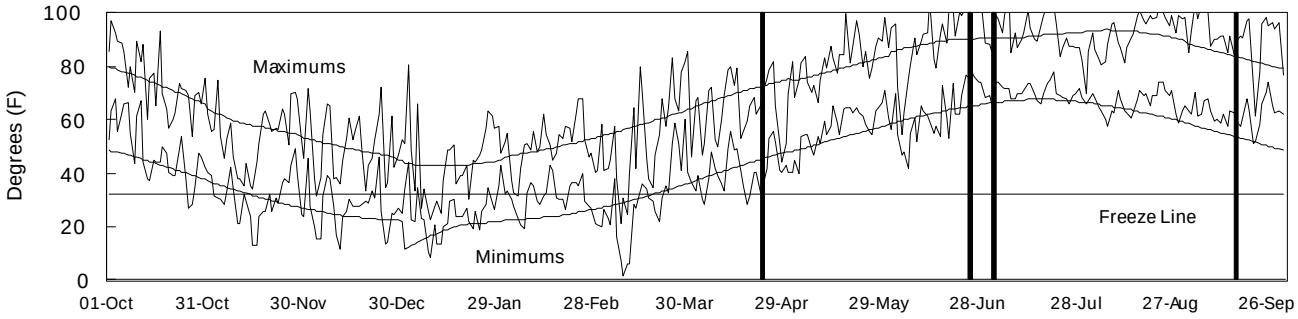
1998 GROWING CONDITONS:

Good seedbed conditions resulted in good stands for most entries. May and June were much drier than normal. Temperatures in May and June fluctuated between moderately below and well above normal. July precipitation was well above normal. Insecticide was applied in late July for corn borer control. No appreciable precipitation fell in August and September. Temperatures continued well above normal, and the crop matured and ripened rapidly.

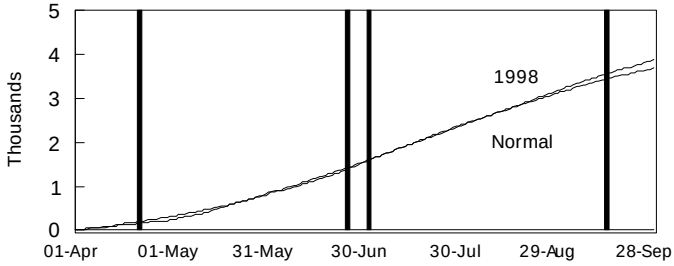
PRECIPITATION



DAILY TEMPERATURES



GROWING DEGREE DAYS



GROWING-SEASON WEATHER SUMMARY

Month	Precipitation 1998	Precipitation Normal	Average Temp. 1998	Average Temp. Normal	GDD 1998	GDD Normal
April	2.1	2.1	53	57	248	320
May	2.5	3.3	70	66	589	493
June	2.0	3.8	77	76	716	756
July	5.5	2.9	81	79	886	851
August	0.3	2.4	80	78	776	734
Sept.	0.9	2.5	77	69	700	559
Season Totals	13.3	16.9	73	71	3914	3714

TABLE 24. STAFFORD CO. IRRIGATED SHORT-SEASON CORN PERFORMANCE TEST RESULTS, 1996-98.

BRAND	NAME	ACRE YIELD, BUSHELS					YIELD AS % OF TEST AVERAGE			97-98		1998				
		1998	1997	1996	2-Yr. AVG.	3-Yr. AVG.	1998	1997	1996	Days to Silk	Grain Moist. %	Days to Silk	Grain Moist. %	Final Stand %	Ldg %	Test Wt. lb/bu
MATURITY CHECK	SHORT - C4111	171	200	--	185	--	87	97	--	70	12	66	11	99	1	60
DEKALB	DK586	204	--	--	--	--	103	--	--	--	--	68	11	99	1	60
NC+	1585	163	188	--	176	--	83	91	--	71	12	68	11	96	3	60
DEKALB	DK551	178	--	--	--	--	91	--	--	--	--	69	11	100	0	59
GARST	8543IT	199	225	--	212	--	101	109	--	73	13	69	11	88	1	60
MYCOGEN	2620	177	--	--	--	--	90	--	--	--	--	69	11	100	2	61
PIONEER	35N05	210	--	--	--	--	107	--	--	--	--	69	11	103	0	62
PIONEER	3563	205	213	--	209	--	104	103	--	71	12	69	11	101	1	61
NC+	4880	199	--	--	--	--	101	--	--	--	--	69	12	99	0	59
DELANGE	DS 1885	204	--	--	--	--	103	--	--	--	--	70	11	99	0	60
DELANGE	DS 1204	197	218	179	207	198	100	105	106	73	12	70	11	87	1	59
TERRA	TR1087	208	204	--	206	--	105	98	--	73	13	70	11	98	1	60
TERRA	E1089IT	211	--	--	--	--	107	--	--	--	--	70	11	95	1	60
TRIUMPH	1141	213	206	--	209	--	108	99	--	73	13	70	11	101	1	59
MATURITY CHECK	MID-H-2530	205	210	175	208	197	104	102	104	75	13	72	11	99	1	60
MATURITY CHECK	PIONEER 3162	207	218	--	212	--	105	105	--	74	15	72	12	102	2	63
AVERAGES		197	207	169	202	191	197	207	169	72	13	69	11	98	1	60
CV(%)		7	8	7	--	--	7	8	7	--	--	2	4	5	147	1
LSD(0.05)**		17	20	14	--	--	8	10	8	--	--	1	NS	6	NS	1

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

TABLE 25. KANSAS SHORT-SEASON CORN TEST YIELD SUMMARY, 1996-1998.

			1998 YIELD AS % OF TEST AVERAGE[1]				1996-1998		
	BRAND	NAME	FRA	LAB	STI	AVG.	DYA (bu/a)[2]	S.E.[3]	N[4]
c	MATURITY CHECK	PIONEER 3162	116	123	105	115	6.33 *	1.37	6
	TERRA	TR1087	--	--	105	--	-3.08	2.22	4
	NC+	4616	115	--	--	--	-4.85	3.12	5
c	MATURITY CHECK	MID-H-2530	103	103	104	103	-5.54 *	1.1	9
	PIONEER	3563	103	95	104	101	-7.32	3.27	6
	TRIUMPH	8810	114	102	--	--	-7.84	3.96	4
	DELANGE	DS 1204	107	97	100	101	-9.9 *	2.58	9
	DEKALB	DK569	106	98	--	--	-10.06	5.03	4
	GARST	8560	--	105	--	--	-13.57	4.54	4
	TERRA	TR1026	--	84	--	--	-20.72	8.15	5
	MATURITY CHECK	SHORT - C4111	88	83	87	86	-25.45 *	3.03	6
	NC+	1585	--	--	83	--	-27.93 *	4.42	4
	ASGROW	RX670	105	103	--	--	--	--	--
	DEKALB	DK527	--	88	--	--	--	--	--
	DEKALB	DK545BtY	61	--	--	--	--	--	--
	DEKALB	DK551	--	--	91	--	--	--	--
	DEKALB	DK580BtY	--	107	--	--	--	--	--
	DEKALB	DK586	--	--	103	--	--	--	--
	DELANGE	DS 1885	--	--	103	--	--	--	--
	GARST	8543IT	--	--	101	--	--	--	--
	GARST	8600IT	--	105	--	--	--	--	--
	HOEGEMEYER	2591	71	--	--	--	--	--	--
	HOEGEMEYER	2623	111	--	--	--	--	--	--
	MYCOGEN	2620	98	81	90	90	--	--	--
	NC+	3877	102	93	--	--	--	--	--
	NC+	4880	--	104	101	--	--	--	--
	NK	N4640BT	107	116	--	--	--	--	--
	NK	N53-MI	103	99	--	--	--	--	--
	PIONEER	35A19	93	99	--	--	--	--	--
	PIONEER	35N05	96	120	107	107	--	--	--
	TERRA	E1089IT	--	--	107	--	--	--	--
	TERRA	TR1047	--	95	--	--	--	--	--
	TRIUMPH	1141	--	--	108	--	--	--	--
	AVERAGES	(bushels/acre)	116	112	197	141	--	--	--
	LSD(0.05)**		11	11	8	--	--	--	--

1 FRA = Franklin Co. Test, East Central Exp. Field, Ottawa LAB = Labette Co. Test, SE Res. Center, Parsons
STI = 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.

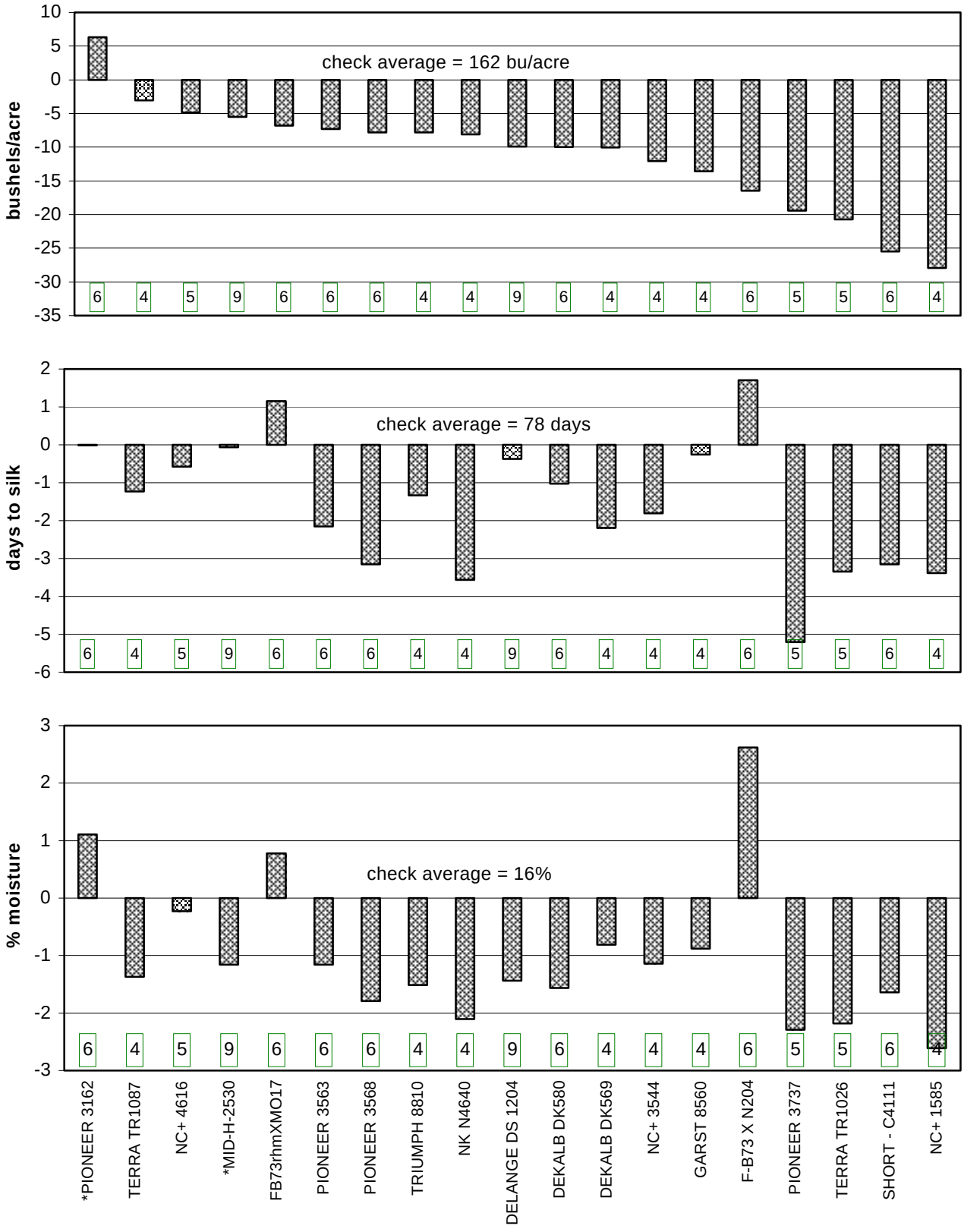
3 SE = Standard Error of DYA; measure of consistency of yield differences.

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; each hybrid 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, 1996-1998.



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 1998 Kansas Corn Performance Tests

AgriPro
Sherry Triplett
AgriPro Seeds, Inc.
23959 580th Ave
Ames, IA 50010
800-373-1741

Asgrow
Gary Carlson
Asgrow Seed Co.
Rt 1, Box 1B
King City, MO 64463
660-535-4832

Asgrow
Tim Cupka
Asgrow Seed Co.
4140 114th Street
Des Moines, IA 50322-7570
515-331-7163

Cargill
Dan Froehhlich
Cargill Hybrid Seeds
P.O. Box 5645
Minneapolis, MN 55440
612-742-2570

DeKalb
Diane Freeman
DeKalb Plant Genetics Corp.
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.
U.S. Route 24 East
Astoria, IL 61501
800-262-4480

Garst
Garst Seed Co.
2369 330th St.
Slater, IA 50244
800-831-6630

Golden Harvest
Bill Green
J.C. Robinson Seed Co.
100 J.C. Robinson Blvd.
P.O. Box A
Waterloo, NE 68069
800-228-9906

HPH
Jim Kramer
Kramer Seed Farms
High Plains Hybrids
1114 S. Monroe
Hugoton, KS 67951-2934
800-848-1988

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

Kaystar
Kenneth King
Kaystar Seed
702 3rd St. SW
P.O. Box 947
Huron, SD 57350
605-352-8791

LG Seeds
Mitch Jensen
LG Seeds
3551 City Rd. F Box 88
Tekamah, NE 68061
800-752-6574

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

MSG (Ohlde)
Eric Woofter
Midwest Seed Genetics, Inc.
Rt. 1, Box 37
Hanston, KS 67849
316-623-2075

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

(continued)

APPENDIX 1: Entrants in the 1998 Kansas Corn Performance Tests

Miller Preferred
Donald Miller
Miller Grass Seed Co.
1600 Cornhusker Hwy
Box 81823
Lincoln, NE 68501
402-438-1232

Mycogen
Kelly Montgomery
Mycogen Seeds
1340 Corporate Center Curve
P.O. Box 21428
St. Paul, MN 55121-1428
800-692-6436

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

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

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

PSA
Mitch Quirin
Coop Seeds, Inc.
661 510th St.
Alta, IA 51002
712-296-3663

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

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

Stauffer
Sharon Carter-Bahe
Stauffer Seeds
P.O. Box 68
Aurora, NE 68818
800-676-7759

Terra
Harold Davis
Terra International, Inc.
PO Box 6000
Sioux City, IA 51102-6000
712-233-3609

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

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

APPENDIX 2: Entries in the 1998 Kansas Corn Performance Tests

AGRIPRO	GDD	DBL	GRN	RES	P	F*
AP 9489	2440	108			N	Y
AP 9520	2470	109			N	Y
AP 9565	2520	111			N	Y
AP 9597	2550	113			N	Y
AP 9656	2550	113			N	Y
AP 619	2560	114			N	Y
AP 9828	2780	118			N	Y
AP 9843	2780	118			N	Y

ASGROW	GDD	DBL	GRN	RES	P	F*
RX826	2650				Y	Y
RX623IMI	2450	105		IMI	Y	N
RX670	2570	105			Y	Y
RX730	2550	111	FG		N	Y
RX760	2570	113			N	Y
RX799Bt	2650	114		Bt	N	Y
RX813	2650	117	FG		N	Y
XP8897	2650	119			Y	Y

CARGILL	GDD	DBL	GRN	RES	P	F*
6997	2530	112			N	N
6888	2550	112			N	N
7770	2550	114			Y	Y
8011	2615	115			N	Y
8412	2630	117	FG		N	Y

DEKALB	GDD	DBL	GRN	RES	P	F*
DK527	2555	102			Y	Y
DK545BtY	2550	104		Bt	Y	Y
DK551	2650	105			Y	Y
DK569	2670	106			Y	Y
DK580BtY	2710	108		Bt	Y	Y
DK586	2710	108			Y	Y
DK595BtX	2720	109		Bt	Y	Y
DK621	2770	112			Y	Y
DK626BtX	2800	112		Bt	Y	Y
DK632	2800	113			Y	Y
DK641	2775	114			Y	Y
DK658	2800	115			Y	Y
DK679	2885	117			Y	Y
DK687	2930	118			Y	Y

DELANGE	GDD	DBL	GRN	RES	P	F*
DS 1204	2400	104	Wax		Y	Y
DS 1885	2575	108			Y	Y
DS 1995	2700	114	Wax		Y	Y
DS 1997	2720	114	Wax		Y	Y

FONTANELLE	GDD	DBL	GRN	RES	P	F*
5306					N	Y
5335					N	Y
5627				IMI	N	Y
5786					N	Y

FREEDOM	GDD	DBL	GRN	RES	P	F*
5555						
5680						

GARST	GDD	DBL	GRN	RES	P	F*
8600IT	2510	105		IT	N	Y
8560	2540	105			Y	Y
8541IT	2560	108		IT	N	Y
8543IT	2570	109		IT	N	Y
8546	2570	110			N	Y
8464	2570	111			N	Y
8366	2580	113			N	Y
8342	2610	114			N	Y
8285	2670	118			N	Y
8222IT	2670	119	FG	IT	N	Y

GOLDEN HARVEST	GDD	DBL	GRN	RES	P	F*
H-2516	2580	110			N	Y
H-2547	2610	112			N	Y
H-2581	2720	114			N	Y
H-2643IMI	2740	115		IMI	N	Y

HAWKEYE	GDD	DBL	GRN	RES	P	F*
SX44A	2570	108			N	Y
SX55	2595	110			N	Y
SX62	2600	111			N	Y
SX76	2605	111			N	Y
8989	2635	113			N	N
SX81	2635	113			N	Y

HOEGEMEYER	GDD	DBL	GRN	RES	P	F*
2591	2440	101			Y	Y
2623	2530	108			N	Y
2645	2580	110			N	Y
2650	2590	111			N	Y
2666	2610	113	FG		N	Y
2693	2650	115			N	Y
2682	2670	116			Y	Y
683 IMI	2670	116		IMI	N	Y
2761	2720	118			N	Y

*GDD = Growing Degree Days; DBL = Days to Black Layer; GRN = Grain characteristics (FG = Food Grade, Wax = Waxy); RES = Herbicide and insect resistance traits (IMI, IT = Imidazolinone Resistant/Tolerant, ECB = European Corn Borer Resistance); P = Prolific; F = Flex ear; values provided by entrants.

(continued)

APPENDIX 2: Entries in the 1998 Kansas Corn Performance Tests

HPH	GDD	DBL	GRN	RES	P	F*
KS 5119		111			N	Y
KS 5141		114			N	Y
KS 1155		115			Y	Y
KS 2186		118			N	Y

KAYSTAR	GDD	DBL	GRN	RES	P	F*
KX - 777		110			N	Y
KX - 808		111			N	Y
KX - 909		114			N	Y

LEWIS	GDD	DBL	GRN	RES	P	F*
4137	2500	107			N	Y
5446	2560	111			N	Y
5808	2600	113			N	Y
8268	2700	117			N	Y

LG SEEDS	GDD	DBL	GRN	RES	P	F*
LG2587						
LG2616						
LG2694						
LG2579	2520	109			N	Y
LG2624	2550	112			N	Y
LG2637	2580	114			N	Y
LG2726	2635	118	FG		N	Y

MIDLAND	GDD	DBL	GRN	RES	P	F*
709					Y	Y
747					Y	Y
764					Y	Y
798					Y	Y
774	2665	117			Y	Y
786	2690	118			Y	Y

MILLER PREF.	GDD	DBL	GRN	RES	P	F*
MP-1112						
MP-1155						
MP-1123		112			N	Y
MP-1131		113			N	Y
MP-1133		113			N	Y

MSG (OHLDE)	GDD	DBL	GRN	RES	P	F*
G 7636	2530	110			N	Y
G 7711	2540	111			N	Y
G 8511	2550	112			N	Y
G 8440	2560	113			N	Y
G 8699	2560	113			N	Y
G 8771	2600	114			N	Y

MYCOGEN	GDD	DBL	GRN	RES	P	F*
2620	2540	105			N	Y
2722	2725	111			N	N
2725	2705	112			N	Y
7250	2730	114			N	N
2815	2775	115			N	Y
2888	2865	118			N	Y
8460	2895	119			N	Y

NC+	GDD	DBL	GRN	RES	P	F*
1585	2245	94			Y	Y
3877	2420	106				Y
5018	2266	110				Y
4616	2425	110				Y
4646	2425	111				Y
4880	2430	111				Y
5445	2515	113				Y
5778	2510	114			Y	Y
6868	2570	117			?	Y
6959	2590	117			Y	Y
7117	2590	118				Y

NK	GDD	DBL	GRN	RES	P	F*
NX6567						Y
N4640BT	2530	104				Y
N53-MI	2650	107				Y
NX6236	2680	110				Y
N7070BT	2760	114				Y
N7333BT	2780	114				Y
N7639BT	2800	115				Y
N7590BT	2810	115				Y
N79-L3		118	FG			Y
4662	2870	119			N	Y
N83-N5	2880	119				Y

OTTILIE	GDD	DBL	GRN	RES	P	F*
4888	2510	106	FG		N	Y
2467	2640	111			Y	Y
5233	2690	113	FG		Y	Y
5460	2700	114			Y	Y
5606X	2750	114			Y	Y
5550	2756	115			Y	Y
5480	2800	116	FG		Y	Y

*GDD = Growing Degree Days; DBL = Days to Black Layer; GRN = Grain characteristics (FG = Food Grade, Wax = Waxy); RES = Herbicide and insect resistance traits (IMI, IT = Imidazolinone Resistant/Tolerant, ECB = European Corn Borer Resistance); P = Prolific; F = Flex ear; values provided by entrants.

(continued)

APPENDIX 2: Entries in the 1998 Kansas Corn Performance Tests

PFISTER	GDD	DBL	GRN	RES	P	F*
3034	2680	110				N
2652	2725	110			N	Y
2680	2725	110	FG		N	Y
3049	2750	111			N	Y
3977		117				Y
3810		118				Y

PIONEER	GDD	DBL	GRN	RES	P	F*
3563	2550	103			N	Y
35A19	2580	104		IMI,I	N	Y
35N05	2630	105		Bt	N	Y
34K77	2660	107	FG		N	Y
3489	2630	109			N	Y
33H67	2710	112	FG		N	Y
33R87	2710	112	FG		N	Y
33A14	2710	113		Bt	N	Y
32K61	2770	114			N	Y
32J55	2740	116			N	Y
3237	2790	116			N	Y
31A12	2820	118			N	Y
31B13	2850	119		Bt	Y	Y

PREMIUM	GDD	DBL	GRN	RES	P	F*
P267A		115			N	Y

PSA	GDD	DBL	GRN	RES	P	F*
7727	2510	112			N	Y
4700Bt	2530	113		Bt	N	Y
7864	2570	115			N	Y
7855	2580	115			N	Y

RENZE	GDD	DBL	GRN	RES	P	F*
6318	2510	141			N	Y
6337	2515	141			N	Y
6345	2555	143			N	Y
6349	2575	144			N	Y
6368IP	2585	146		IMI	N	Y
6386	2605	146	FG		N	Y
6397	2645	147			N	Y
8418BT	2650	147		Bt	N	Y
X7115 EXP	2680	148			N	Y

STAUFFER	GDD	DBL	GRN	RES	P	F*
2625	2560	108				Y
2436	2650	110				Y
2792	2890	116				Y
2820	2945	118				Y

TERRA	GDD	DBL	GRN	RES	P	F*
TR1188					N	N
TR1026	2410	102			N	Y
TR1047	2450	104			N	N
TR1087	2520	108			N	N
E1089IT	2550	108		IMT	N	Y
E1128IT	2570	112		IMT	N	N
E1148		114			N	Y
E1158IT	2600	115		IMT	N	N
TR1157	2680	115			N	Y
E1178		117			N	Y

TRIUMPH	GDD	DBL	GRN	RES	P	F*
8810	2410	107			N	Y
1141	2470	111			N	Y
1514	2550	115			N	Y
1522	2560	115			N	Y
1866	2610	118			N	Y

WILSON	GDD	DBL	GRN	RES	P	F*
E3034	2700	109			N	Y
E6013	2750	110			N	Y
1664	2775	111			N	Y
2330	2975	120			N	Y
E975307	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 and insect resistance traits (IMI, IT = Imidazolinone Resistant/Tolerant, ECB = European Corn Borer Resistance); P = Prolific; F = Flex ear; values provided by entrants.

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Excerpt from the

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Permission is hereby given to Kansas State University to test our varieties and/or hybrids designated on the attached entry forms in the manner indicated on the test announcement. I understand that all results from Kansas crop performance tests belong to the University and to the public and shall be controlled by the University so as to produce the greatest benefit to the public. It is further agreed that the name of the University shall not be used by the company in any commercial advertising either in regard to this agreement or any other related matter.

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NOTE: Trade names are used to identify products. No endorsement is intended, nor is any criticism implied of similar products not named.

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