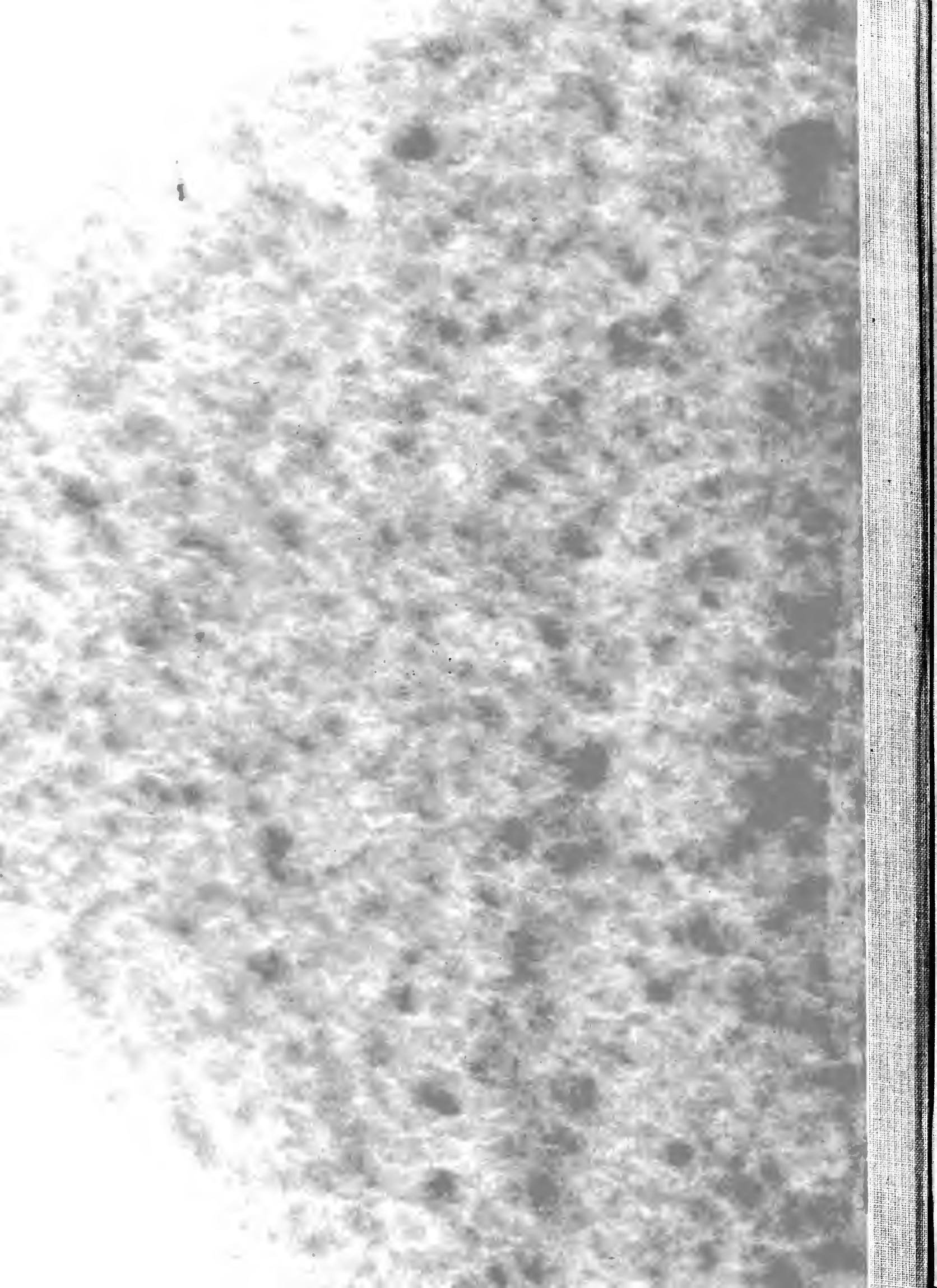


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# 1971 PERFORMANCE of COMMERCIAL CORN HYBRIDS in ILLINOIS

(WITH 1969 AND 1970 LISTINGS)



G. L. Ross  
J. E. Dillon  
D. W. Graffis

Circular 1048

## CONTENTS

NEW TESTS . . . . .	1
PLAN OF THE TESTS . . . . .	1
MEASURING PERFORMANCE . . . . .	1
GROWING CONDITIONS ON 1970 TEST FIELDS . . . . .	3
SOURCES OF SEED . . . . .	4
RESULTS OF VARIETY TESTS	
Extreme Northern Illinois: Woodstock . . . . .	5
Northern Illinois: DeKalb . . . . .	6
West North Central Illinois: Galesburg . . . . .	8
East North Central Illinois: Elwood . . . . .	10
West Central Illinois: Augusta . . . . .	11
Central Illinois: Stanford . . . . .	12
East-Central Illinois: Urbana . . . . .	13
West-South Central Illinois: Greenfield . . . . .	16
Southern Illinois: Brownstown . . . . .	18
Extreme Southern Illinois Bottomland: Dixon Springs . . . . .	20
Extreme Southern Illinois Upland: Carbondale . . . . .	22

This circular was prepared by G. L. Ross, Assistant Agronomist, J. E. Dillon, Associate Agronomist, and D. W. Graffis, Professor of Forage Crops Extension. Data processing was done by the Statistical Laboratory of the Agronomy Department. R. D. Seif, Professor of Biometry, and S. G. Carmer, Associate Professor of Biometry, supervised the analysis and preparation of the data.

Urbana, Illinois

December, 1971

Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. JOHN B. CLAAR, Director, Cooperative Extension Service, University of Illinois at Urbana-Champaign

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# PERFORMANCE OF COMMERCIAL CORN HYBRIDS IN ILLINOIS, 1971

CORN YIELDS IN ILLINOIS IN 1971 are estimated to average 102 bushels per acre, or 28 bushels more than the 1970 average production. A dry, warm spring promoted early planting and the corn crop was off to its best start in a number of years. Planting of the test plots reported in this circular was delayed some by late arrival of seed from winter nurseries in Florida, Texas, Mexico, and Hawaii.

June was an ideal growing month except for an area in north-central Illinois between Galesburg and Joliet which was short of rainfall. East-central Illinois had a slight drouth in June and south-central Illinois was short of rainfall in August. A dry September and October made an ideal harvest period for corn before lodging became serious. Severe lodging occurred following heavy winds in October in some areas of the state.

A larger than expected supply of normal and blend hybrid seed at planting time helped reduce losses from southern corn leaf blight as compared with 1970. The quality of 1971 seed varied. Some hybrids had low resistance to northern leaf blight, yellow leaf spot, southern leaf blight race "O," and southern leaf blight race "T." These leaf diseases are classified as "blight" in the tables in this circular. The fields were classified from August 30 through September 10 and many of the lesions had run together preventing separation of the diseases. A rating scale from 0 to 100 was used. A rating of 0 indicates little or no lesions while a rating of 100 indicates that the plant was almost or completely dead. Not all locations were equally infected. *Do not compare yields or leaf blight ratings of a hybrid at one location with hybrids at another location. Make all comparisons within a test location.*

Yields for 1969, 1970, and 1971 are presented separately because of the different cytoplasm used in the three years and the devastating attack of southern leaf blight in 1970.

Seed companies were asked to identify the type of cytoplasm in each entry of the tests reported in this circular. Hybrids using Texas male sterile cytoplasm are referred to as "T" cytoplasm.

## New Tests

Two new trials were initiated in 1971 to provide yield information for hybrids high in lysine (a component of protein). Hybrids with opaque-2 backgrounds and hybrids with floury-2 backgrounds were planted in separate isolation blocks under the direction of R. J. Lambert of the Department of Agronomy. Lysine analysis was conducted by the Illinois Maize Genetics Laboratory.

## Plan of the Tests

**Selection of entries.** Each year all producers of hybrid seed corn in Illinois and surrounding states are invited to enter hybrids in the Illinois performance trials. This testing program is financed by a fee of 30 dollars for each hybrid at each location entered. Most of these hybrids are commercially available, although a few experimental hybrids are also entered.

**Number and location of tests.** In 1971, 20 major tests were conducted at 11 locations in the state (see map on page 2). These sites represent major soil and climatic areas of the state.

**Hybrids.** Over 400 hybrids from 49 companies were tested in 1971. Seed for the trials was supplied by the seed companies.

**Field-plot design.** Three or four replications in a randomized complete block or lattice design were used. These arrangements give each hybrid an equal chance to show its merits.

**Planting methods.** All trials were planted by hand except at Galesburg, Urbana, and Brownstown, which were planted by machine. All test fields except at DeKalb, Urbana, Stanford, and Brownstown were part of larger corn fields and thus were surrounded by other corn. Each hybrid plot was overplanted 30 percent and later thinned to desired stands except at Dixon Springs where the field was replanted. Each plot was three rows wide and 26 feet long except at Woodstock where one-row plots were used to avoid road spoil. Small plots help to avoid differences due to soil conditions. The center row of each plot was harvested to determine yield.

**Fertilization.** All test fields were at a high level of fertility. Additional fertilizer was plowed down or side-dressed as needed to assure top yields.

**Method of harvest.** All plots were harvested with a self-propelled combine. Shelled corn from each plot was collected, weighed, and tested for moisture percentage. No allowance was made for shelled corn that might have been lost in harvest.

## Measuring Performance

Occasionally hybrids too late in maturity for a given area are entered in these tests. Such hybrids are often high in yield but their moisture content may make them poor choices for farm use unless proper drying or storage facilities are available.

**Yield of grain.** Shelled-corn weight and moisture percentage were measured for each plot of a hybrid and converted to bushels per acre of No. 2 shelled corn

(15.5 percent moisture). An electronic moisture tester was used for all moisture readings.

**Erect plants.** The number of erect plants in each plot of a hybrid was counted at harvest time. Any plant leaning at an angle of more than 45 degrees or broken below the ear was considered lodged. Plants broken above the ear were considered erect.

**Stand.** In late June, plants in all plots on all fields were counted and the percent of stand was computed by comparing this number with the number of kernels planted. Plots with over 100-percent stand were thinned at this time. Stand differences may be caused by failure to germinate or by disease, insect injury, or cultivation damage.

**Plants per acre.** Plants per acre were calculated for each plot by using the percent stand obtained from plant counts. Differences in plants per acre and differences in percent stand are caused by the same factors.

**Blight infection.** The observations were noted during the last week of August and the first week of September. A reading of 0 indicates no blight visible. A reading of 5 to 10 indicates blight visible but little or no development. Higher readings indicate sensitivity to blight and the amount of infection on the plants. A number of hybrids in 1971 were observed as being blends of N and T cytoplasm and were averaged. Drouth caused premature dying of corn at the Elwood field and prevented reliable leaf-blight ratings in 1970.

**Comparing hybrids.** In any test of plant material, it is impossible to measure performance exactly. Samples may vary, soils may not be uniform, and many other conditions may produce variability. *Results of repeated tests, like those reported in this circular, are more reliable than those of a single year or a single strip test.* In general, a yield difference of a few bushels per acre is not significant in these tests. When one hybrid consistently outyields another at several test locations and over several years of testing, the chances are good that this difference is *real* and should be a consideration in choosing a hybrid. But yield alone is not enough. Consider also the grain moisture content, percentage of erect plants, percent stand, or plants per acre in comparing yields.

As an aid to comparing hybrids, certain statistical tests have been devised. D. B. Duncan<sup>1</sup> has outlined an approach to the problem of multiple comparisons when only two means are compared among a set of hybrid means. Certain factors not accounted for in previous tests of this type are included in Bayes L.S.D. This test is applied in the same manner as previous statistical tests used in these circulars. When two hybrids in a trial are compared, and the difference between them is greater than the tabulated L.S.D. value, then the hybrids are said to be "significantly different."

<sup>1</sup>Duncan, D. B., "A Bayesian Approach to Multiple Comparisons," *Technometrics*, 7:171-222, 1965.

Table 1. — General Information: Illinois Hybrid Corn Tests, 1971

Field, county, location, and number of entries	Date planted	Date harvested	Aver. acre yield	Moisture in grain	Lodged plants	Aver. population
			<i>bu.</i>	<i>perct.</i>	<i>perct.</i>	
<b>40-inch rows, 18,000 plants per acre</b>						
Woodstock: McHenry, Ex. N, 46.....	May 10	Oct. 14	139	21.3	99	17,500
<b>38-inch rows, 18,000 plants per acre</b>						
Augusta: Hancock, WC, 56.....	May 13	Oct. 25	162	21.4	97	17,700
<b>30-inch rows, 18,000 plants per acre</b>						
DeKalb: DeKalb, N, 53.....	May 14	Oct. 15	151	26.0	98	17,700
Urbana: Champaign, EC, 82.....	May 17	Oct. 20	134	22.9	98	17,900
Greenfield: Macoupin, WSC, 41.....	April 29	Oct. 5	117	21.7	78	17,900
Brownstown: Fayette, S, 45.....	April 27	Oct. 6	106	18.0	72	17,600
Carbondale: Jackson, Ex. S, 28.....	April 22	Sept. 30	141	22.5	97	17,900
Dixon Springs: Pope, Ex. S, 49.....	May 28	Oct. 1	133	31.0	94	17,500
<b>30-inch rows, 22,000 plants per acre</b>						
Brownstown: Fayette, S, 44.....	April 27	Oct. 6	85	16.5	75	21,300
Carbondale: Jackson, Ex. S, 21.....	April 22	Sept. 30	103	22.2	96	21,800
<b>30-inch rows, 24,000 plants per acre</b>						
DeKalb: DeKalb, N, 81.....	May 14	Oct. 16	151	26.3	99	23,700
Elwood: Will, ENC, 61.....	May 10	Oct. 13	123	24.1	99	23,400
Stanford: McLean C, 78.....	May 3	Oct. 29	135	19.8	99	23,600
Urbana: Champaign, EC, 107.....	May 18	Oct. 19	132	22.1	95	24,000
Greenfield: Macoupin, WSC, 39.....	April 29	Oct. 5	105	20.9	79	23,600
Dixon Springs: Pope, Ex. S, 23.....	May 28	Oct. 1	149	30.9	98	22,600
<b>28-inch rows, 18,000 plants per acre</b>						
Galesburg: Knox, WNC, 44.....	May 4	Oct. 11	143	22.7	98	17,900
<b>28-inch rows, 24,000 plants per acre</b>						
Galesburg: Knox, WNC, 75.....	May 4	Oct. 11	142	21.5	95	23,900





## Growing Conditions on 1971 Test Fields

**Extreme Northern Illinois: Woodstock.** This test field represents the cool, humid area in northeastern Illinois. The test plot is on land operated by the Hughes Farms and Seed Company. The soil type is Proctor silt loam, a fertile, deep, well-drained, dark prairie soil. The 1971 test was in a field of fourth-year corn. The test was planted in one-row plots to avoid road spoil that was visible at planting time. Conditions were favorable for an above-average crop.

**Northern Illinois: DeKalb.** This test is on the University of Illinois' Northern Illinois Research Center near Shabbona in DeKalb County. R. E. Bell is field manager of the research center. The soil type is Flanagan silt loam, a dark-brown, adequately drained soil of high fertility. The rotation used is a corn-corn-soybean-oats-clover rotation. The two tests at this location were on second-year corn. The field was dry at planting time and stands were irregular.

**West North-Central Illinois: Galesburg.** This test is located on the Hawkinson Farms, operated by Harold and Dave Hawkinson. The test field was a highly fertile, heavy-textured, Sable silty clay loam. Planting was completed in early May. About one inch of rain was received from planting date to July 1. The crop developed slowly during the early portion of the season, but July rains resulted in excellent growth which extended into fall.

**East North-Central Illinois: Elwood.** This test is on the Northeastern Illinois Agronomy Research Center in Will County. Dale Harshbarger is field manager. The test was on a poorly drained area of Drummer silty clay loam. Drummer is one of the best soil types in the area. The field received good rainfall and favorable temperatures in May but there was less than 1.5 inches of rainfall in June.

**West-Central Illinois: Augusta.** This test is located on the William Finney farm, west of Augusta in Hancock County. The soil is a Harrison silt loam, a moderately well-drained, dark-grayish-brown prairie soil. The field was planted in mid-May and received good rainfall throughout the growing season. There

was slight hail damage in late August. Harvest was completed before lodging was severe.

**Central Illinois: Stanford.** This test is located in the western part of McLean County, near Stanford, on a farm operated by Howard Logsdon. The soil is a deep, well-drained, fertile Muscatine silt loam. The field was in fifth-year corn. Rainfall was very irregular and the field was on the dry side most of the summer.

**East-Central Illinois: Urbana.** This test is located on the Agronomy South Farm at the University of Illinois at Urbana-Champaign in Champaign County. M. G. Oldham is the farm manager. Fields on which the test plots were grown are level, heavy-textured Drummer silty clay loam. The two trials were in the second year of corn of a corn-corn-oats-alfalfa rotation. There was a short period in June when the increased planting rate test was noticeably short of moisture.

**West South-Central Illinois: Greenfield.** This test represents the moderately poorly drained soils of western south-central Illinois. The soil is Herrick silt loam. The plot is located between Palmyra and Greenfield in Macoupin County on a farm operated by C. H. Ross, Jr. Planting was completed on April 29 and poor stands resulted because of a dry seedbed. Rainfall was spotty. The test did not receive adequate rainfall for maximum yield.

**Southern Illinois: Brownstown.** This test is located at the University of Illinois' Brownstown Experiment Field in Fayette County. Arden Christensen is the area agronomist in charge of the field. The soil is Cisne silt loam, a poorly drained, gray prairie soil with a well-developed claypan. Natural fertility of the soil is low. High yields were prevented by an August drought.

**Extreme Southern Illinois Bottomland: Dixon Springs.** This test was located at the University's Dixon Springs Agricultural Center in Pope County with George McKibben, area agronomist, cooperating. The test plot was located on Sharon silt loam, a light-colored, moderately well-drained to well-drained, medium-textured, bottomland soil. An April 30 planting was covered by floodwaters about mid-May. The test was replanted on May 28 in a field of second-year corn and adjacent to a southern corn leaf blight experiment. There was an abundant supply of southern corn leaf blight spores in the area.

**Extreme Southern Illinois Upland: Carbondale.** The test at Carbondale represents the typical upland area in southern Illinois. This test was conducted at the Southern Illinois University and University of Illinois Agronomy Research Center where Roy Browning is superintendent. The soil types are Weir and Stoy silt loams, which are rather shallow, silty soils over claypan. The field was planted in early April and harvested in early October. The growing conditions were more favorable in 1971 than they have been for several years.

Table 2. — Growing Season Rainfall

Field	May	June	July	August
	<i>inches</i>			
Woodstock.....	1.7	3.4	1.6	2.1
DeKalb.....	1.5	2.2	1.7	3.3
Galesburg.....	1.3	.7	4.2	.8
Elwood.....	2.5	1.5	2.4	1.8
Augusta.....	1.7	.3	2.9	1.8
Stanford.....	3.4	1.1	6.1	1.3
Urbana.....	4.6	1.2	9.5	1.4
Greenfield.....	2.4	1.3	2.3	.7
Brownstown.....	1.0	2.3	4.9	.1
Carbondale.....	5.7	.9	3.3	4.9
Dixon Springs.....	4.7	2.4	5.6	2.9

## SOURCES OF SEED

ACCO Seed	Anderson-Clayton	Belmond, Iowa
Ainsworth Hybrids	Ainsworth Seed Co.	Mason City
Anderson Hybrids	The Anderson's	Maumee, Ohio
ASGROW Hybrids	ASGROW Seed Co.	4244 Clinton Ave., Des Moines, Iowa
Bear Hybrids	Bear Hybrid Corn Co.	Box 628, Decatur
Blaney Hybrids	Blaney Farm, Inc.	R.R. 4, Madison, Wisconsin
Bo-Jac Hybrids	Bo-Jac Hybrid Corn Co.	Mt. Pulaski
C.I. Seed	Central Illinois Seed, Inc.	R.R. 6, Springfield
Coop Hybrids	Farmland Industries, Inc.	P.O. Box 7305, Kansas City, Missouri
Cornelius Hybrids	Cornelius Seed Corn Co.	Bellevue, Iowa
Corn King Hybrids	Malcolm H. Grieve	Pierson, Iowa
Dockendorff Hybrids	Max Dockendorff	Danville, Iowa
Embryo Hybrids	Embryo Seed Co.	101 Chouteau Ave., St. Louis, Missouri
Farmers Union Hybrids	Farmers Union Seed Co.	Cedar Falls, Iowa
Frey Hybrids	Frey Hybrid Corn Co., Inc.	Gilman
Garnett-Ross Hybrids	Garnett-Ross, Inc.	6024 Southport Dr., Bethesda, Maryland
Gutwein Hybrids	Fred Gutwein & Sons, Inc.	Francesville, Indiana
Hoblit Hybrids	Hoblit Seed Farms	Atlanta
Holden Hybrids	Holden Foundation Hybrids	Williamsburg, Iowa
Hughes Hybrids	Hughes Hybrids, Inc.	Woodstock
I.F.S. Hybrids	Illinois Foundation Seeds, Inc.	Box 722, Champaign
Lester Pfister Hybrids	Pfister Hybrid Corn Co.	El Paso
Lewis Hybrids	Frank W. Lewis & Son Seed Farms	Ursa
McAllister Hybrids	McAllister Seed Farms	Mount Pleasant, Iowa
McCurdy Hybrids	W. O. McCurdy & Sons	Fremont, Iowa
McNair Hybrids	McNair Seed Co.	P.O. Box 706, Laurinburg, North Carolina
Migro Hybrids	Midwest Seed Growers Association, Inc.	Mitchell, Indiana
Moews Hybrids	Moews Seed Co.	Granville
Muncy Chief Hybrids	Muncy Chief Hybrids	Muncy, Pennsylvania
O's Gold Hybrids	O's Gold Seed Co., Inc.	R.R. 2, Parkersburg, Iowa
P.A.G. Hybrids	P.A.G. Seeds	Northstar Station, Minneapolis, Minnesota
Pioneer Hybrids	Pioneer Hi-Bred Corn Co. of Illinois	Princeton
Porter-Hosteller Hybrids	Porter-Hosteller Seed Co.	Wilmington, Ohio, and Deer Grove
Prairie Stream Hybrids	Prairie Stream Farm, Inc.	Frankfort, Indiana
Pride Hybrids	Pride Co., Inc.	Glen Haven, Wisconsin
Princeton Hybrids	Princeton Farms	Box 319, Princeton, Indiana
Renk Hybrids	Wm. F. Renk & Sons Co., Inc.	Sun Prairie, Wisconsin
Schenk's Hybrids	Charles H. Schenk & Sons, Inc.	Vincennes, Indiana
Stewart Hybrids	Stewart Hybrids, Inc.	Princeville
Stull Hybrids	Stull Brothers, Inc.	Sebree, Kentucky
Super-Crost Hybrids	Edw. J. Funk & Sons	Kentland, Indiana
Taylor-Evans Hybrids	Taylor-Evans Seed Co.	Tulia, Texas
Todd Hybrids	Todd Hybrid Corn Co.	Burlington, Indiana
Tracy Hybrids	Tracy & Son Farms, Inc.	R.R. 1, Janesville, Wisconsin
Trisler Hybrids	Trisler Seed Farms, Inc.	Fairmount
Trojan Hybrids	Trojan Seed Co.	Box 367, Windfall, Indiana
Van Horn Hybrids	Van Horn Hybrids, Inc.	Cerro Gordo
Victor Hybrids	Polo Seed Co.	Polo
Whisnand Hybrids	Whisnand Hybrid Corn Co.	R.R. 3, Arcola











Table 6. — East North-Central Illinois: Elwood, Increased Planting Rate<sup>a</sup>  
(Planted at 24,000 plants per acre in 30-inch rows)

BRAND AND VARIETY	CYTOPLASMIC TYPE		TOTAL YIELD BU./ACRE			GRAIN MOISTURE PERCENT			ERECT PLANTS PERCENT			PLANTS PER ACRE			BLIGHT PERCENT	
	1971	1970	1971	1970	1969	1971	1970	1969	1971	1970	1969	1971	1970	1969	1971	1970
ACCO UC 378.....	N		124			23.4			100			23333				3
ACCO UC 8951.....	N		91			26.9			98			24000				6
ACCO UC 8900.....	T	T	100	130		25.9	24.3		98	83		23333	24000			3
ACCO UC 9101.....	N		133			26.5			100			24000				0
AINSWORTH X-5.....	T		116			24.3			98			24000				3
AINSWORTH X-20A.....	N		155			27.3			100			24000				0
AINSWORTH X-86.....	N		112			27.4			100			24000				3
AINSWORTH X-8493.....	N	B	123	118	141	27.5	23.2	24.0	99	88	89	22444	24000	24000		3
ASGROC RX60.....	N		146			20.1			100			24000				13
BLANEY DOUBLE A.....	N		126			21.6			100			24000				20
BLANEY BX-AA.....	N		129			19.3			99			24000				16
FREY F60.....	N		123			25.8			100			24000				3
GITWEIN 125.....	N		109			22.4			100			24000				0
GITWEIN 40.....	N		137			20.7			98			24000				16
GITWEIN 69A.....	N	B	132	119		23.0	21.4		97	85		22222	24000			10
GITWEIN 70A.....	N		120			24.7			99			22000				6
HUGHES EXP. 30.....	N		119			23.9			100			23333				3
HUGHES SLX20.....	N	T	117	100		21.8	20.2		100	78		23777	23111			20
HUGHES SLX29.....	N		130			19.4			98			22666				23
MCALLISTER SX6584.....	N		122			28.2			100			24000				0
MCALLISTER SX6837.....	N	T	134	127		27.5	25.8		100	87		23333	24000			3
MCALLISTER SX7001.....	N		104			24.7			100			24000				0
MCALLISTER SX7032.....	N		155			23.6			100			23333				6
MCALLISTER SX7047.....	N		105			22.0			98			22666				6
MCALLISTER SX7066.....	N		122			20.8			100			21333				6
MDEWS M4421.....	N		105			27.7			100			22888				6
MDEWS M6391.....	N		136			30.2			99			24000				0
MDEWS SM229.....	N	T	138	118		21.3	21.2		100	87		24000	23111			20
MDEWS SM327.....	N	T	135	102	136	28.9	21.6	21.5	100	89	88	24000	24000	23777		0
MDEWS SM429.....	N	T	127	107		28.2	22.3		98	77		23111	23777			0
PIONEER 3334.....	N	N	154	141		26.8	23.6		100	97		23555	24000			6
PIONEER 3369A.....	N	B	118	85	127	24.7	24.3	27.4	100	63	89	23333	24000	23777		0
PIONEER 3376.....	N	B	122	112	138	24.9	23.3	23.3	100	77	88	24000	23777	24000		0
PIONEER 3388.....	N	B	146	155		25.2	23.3		99	99		24000	24000			3
PIONEER 3390.....	N		111			23.3			100			24000				3
PIONEER 3505.....	N		119			21.6			100			23111				10
PIONEER 3516.....	N	B	124	82		24.0	19.8		100	83		24000	24000			0
PIONEER 3571.....	N	B	112	123	135	25.3	21.4	22.9	100	93	93	24000	24000	23555		3
PIONEER X1319.....	N		147			25.9			100			23333				3
PIONEER X6618.....	N		113			27.5			100			22444				0
PRIDE R-601.....	N		110			22.3			95			22000				13
PRIDE R-728.....	N		119			20.7			90			24000				13
PRIDE R-771.....	N		92			23.2			98			22888				10
PRIDE R-810.....	N		97			25.8			99			23555				6
RENK RK44.....	B		126			19.2			100			24000				20
SUPER-CROST 4242.....	N		116			25.0			100			23111				6
SUPER-CROST 525.....	N		115			21.2			100			24000				10
SUPER-CROST 527.....	N	T	130	113		20.7	21.0		99	88		23555	24000			23
SUPER-CROST 528.....	N		134			22.5			99			24000				10
SUPER-CROST 565.....	N	B	89	121		25.1	23.5		100	82		24000	24000			0
SUPER-CROST 569.....	N	B	90	105	137	27.0	23.5	23.4	100	87	91	23555	23111	24000		10
TAYLOR-EVANS CASHMAKER.....	T		125			24.9			97			23111				6
TAYLOR-EVANS MASTERMAKER.....	T		119			26.7			100			16444				0
TAYLOR-EVANS MINTMAKER.....	T		118			23.7			100			24000				0
TROJAN TXS 102.....	N	N	142	115		19.7	21.2		100	93		23333	24000			26
TROJAN TXS 104.....	N	N	131	123		21.0	21.2		100	93		23777	24000			23
TROJAN TXS 107.....	N	N	119	92		20.1	20.8		100	91		24000	24000			10
TROJAN TXS 108.....	N	N	148	121		21.6	20.7		100	90		23333	23555			6
TROJAN TXS 112.....	N	T	110	106		25.0	23.1		98	95		23333	17333			3
TROJAN TXS 113.....	N		129			26.4			99			24000				0
VAN HORN CAP 43.....	N	N	131	108	128	27.8	24.6	23.8	96	84	77	22000	24000	23111		0
AVERAGE OF 1971 ENTRIES.....			123			24.1			99			23400				8
L. S. D.....			42			2.1			4			2100				11
C. V.....			17													

<sup>a</sup> Drouth caused premature dying of corn at the Elwood field and prevented reliable leaf-blight ratings in 1970.









Table 9a. — East-Central Illinois: Urbana, Increased Planting Rate  
(Planted at 24,000 plants per acre in 30-inch rows)

BRAND AND VARIETY	CYTOPLASMIC TYPE		TOTAL YIELD BU./ACRE			GRAIN MOISTURE PERCENT			ERECT PLANTS PERCENT			PLANTS PER ACRE			BLIGHT PERCENT	
	1971	1970	1971	1970	1969	1971	1970	1969	1971	1970	1969	1971	1970	1969	1971	1970
ACCO U 378.....	N		137			22.2			95			24000			73	
ACCO UC 8851.....	N		124			21.9			94			24000			50	
ACCO UC 8900.....	T	T	104	127	182	21.1	26.4	26.5	89	36	91	24000	22888	24004	96	28
ACCO UC 9101.....	N		141			22.7			96			24000			40	
AINSWORTH X-19A.....	N		65			25.3			100			24000			23	
AINSWORTH X-717R.....	N		127			23.2			79			24000			40	
ANDERSON 3-W-110.....	N		144			19.0			95			24000			56	
ANDERSON AX-4.....	N		129			18.2			97			24000			73	
ANDERSON AX-5.....	N		148			21.4			97			24000			50	
ASGROW ASX92.....	N		99			24.2			94			24000			23	
ASGROW IXL9.....	N		147			25.2			98			24000			23	
ASGROW RX100.....	N		146			27.5			100			24000			6	
BEAR UNICORN 640.....	N		135			23.3			93			24000			6	
BEAR UNICORN 650.....	N		109			22.8			93			24000			23	
BEAR UNICORN 860.....	N		134			23.8			99			24000			13	
BEAR UNICORN 872.....	N	N	122	137	170	24.2	27.8	24.4	92	61	92	24000	24000	24000	26	6
BO-JAC X1-83.....	N		129			22.7			93			24000			13	
BO-JAC X7L.....	N	B	149	127	174	27.0	28.3	27.2	98	87	93	24000	24000	23998	36	10
BO-JAC X15E.....	N		122			17.5			93			24000			86	
BO-JAC X37.....	N		130			17.9			97			24000			86	
BO-JAC X43.....	N		137			22.1			88			24000			66	
BO-JAC X51.....	N		138			20.0			91			24000			90	
BO-JAC X53.....	N		140			22.1			92			24000			26	
BO-JAC X73.....	N		125			22.2			100			24000			46	
BO-JAC X84.....	N		124			25.3			88			24000			20	
CENTRAL-ILLINOIS C12R.....	N		87			20.6			91			24000			36	
CENTRAL-ILLINOIS C147.....	N	T	134	138		26.0	29.1		97	79		24000	22444		23	11
COOP S-304.....	N	N	114	141		22.4	28.7		95	98		24000	23555		13	5
FARMERS UNION 2250.....	N		144			19.4			99			24000			86	
GUTWEIN 40.....	N		142			16.9			96			24000			86	
GUTWEIN 69A.....	N	B	147	129		21.4	22.1		95	51		24000	23777		43	23
GUTWEIN 70A.....	N		141			19.3			96			24000			93	
GUTWEIN 88.....	N		148			26.2			98			24000			40	
HOLDEN 1003.....	N	N	153	147		21.4	25.3		97	87		24000	24000		53	5
HOLDEN 1007.....	N		155			26.1			93			24000			6	
HOLDEN 1008.....	N		139			21.4			94			24000			66	
LEWIS X21.....	N		149			18.0			97			24000			86	
LEWIS X78.....	N		161	119	155	26.9	27.9	27.2	96	84	95	24000	23777	23554	30	20
LEWIS X82.....	N		140			23.5			88			24000			20	
MC ALLISTER SX6584.....	N	N	124	140	160	22.0	29.4	27.0	100	97	98	24000	24000	23780	40	5
MCALLISTER SX6837.....	N	T	139	122		26.4	28.5		98	80		24000	24000		40	11
MCALLISTER SX7001.....	N		124			21.8			98			24000			50	
MCALLISTER SX7066.....	N		138			17.7			97			24000			96	
MCCUROY MSX88.....	N		126			26.1			98			24000			33	
MOEWS M7372.....	N		108			21.8			87			24000			26	
MOEWS SM327A.....	N		116			21.3			74			24000			36	
MOEWS SM429.....	N	T	118	119		23.3	23.2		95	26		24000	23555		20	20
MOEWS SM520.....	N	T	88	115		22.4	24.6		90	28		24000	16800		16	18
MOEWS SM721.....	N	T	140	93	126	23.9	26.3	22.6	92	18	52	24000	23555	22444	40	16
MUNCY CHIEF SX662.....	B		141			21.9			100			24000			46	
MUNCY CHIEF SX777.....	T		121			20.4			95			24000			83	
MUNCY CHIEF SX878.....	N		136			24.9			96			24000			13	
O'S GOLD SX1101.....	N		136			17.2			99			24000			90	
O'S GOLD SX2101.....	N		131			18.7			96			24000			83	
O'S GOLD SX3104.....	N		132			19.7			100			24000			56	
O'S GOLD SX3200.....	N		126			21.5			95			24000			40	
O'S GOLD SX5500.....	N	T	145	133		24.9	28.3		99	82		24000	23555		33	13
LESTER-PFISTER 14.....	N		136			21.0			89			24000			63	
LESTER-PFISTER 15.....	N		131			19.7			81			24000			70	
LESTER-PFISTER 17.....	N		133			21.4			99			24000			46	
LESTER-PFISTER 27.....	N		140			19.7			96			24000			56	
LESTER-PFISTER 28.....	N		113			21.6			89			24000			66	
LESTER-PFISTER 62.....	N		121			21.8			96			24000			33	
PIONEER 3222.....	N		136			22.1			91			24000			33	
PIONEER 3334.....	N	N	151	145	146	22.2	27.6	23.0	95	97	98	24000	23777	23997	40	5
PIONEER 3368.....	N		139			24.2			94			24000			13	
PIONEER 3369A.....	N	B	125	117	169	23.7	26.4	23.6	96	62	96	24000	24000	23996	13	10
PIONEER 3376.....	N	B	111	102	149	22.4	25.2	24.4	97	70	99	24000	23777	23998	40	11
PIONEER 3387.....	N	U	144	143	147	22.2	25.2	22.6	96	88	98	24000	24000	23998	60	16
PIONEER 3388.....	N	B	159	139		21.8	24.9		91	89		23777	23777		70	12
PIONEER 3390.....	N	B	127	109	155	20.1	22.6	21.2	91	39	93	24000	24000	23999	76	16
PIONEER X6618.....	N		149			23.5			97			24000			20	
PIONEER X8004.....	N	N	134	163		22.0	27.4		98	97		24000	23777		63	5
PRAIRIE STREAM GOLDEN CROSS SX1B.....	N	T	122	127	142	20.2	21.9	17.9	99	36	85	24000	24000	24001	63	30
PRAIRIE STREAM GOLDEN CROSS SX3.....	N		148			17.8			97			24000			76	
PRINCETON SX650.....	N	N	122	140		21.4	24.8		96	80		24000	23555		40	3
PRINCETON SX823.....	N	T	122	104	132	21.6	24.6	23.4	98	74	99	24000	24000	23999	16	20
RENK RK44.....	B		150			17.5			97			24000			83	
SCHENK SX-110.....	N		115			24.7			96			24000			30	
SCHENK SX-440.....	N		134			22.0			95			24000			36	

Table 9a. — Urbana, Increased Planting Rate, continued

BRAND AND VARIETY	CYTOPLASMIC TYPE		TOTAL YIELD BU./ACRE			GRAIN MOISTURE PERCENT			ERECT PLANTS PERCENT			PLANTS PER ACRE			BLIGHT PERCENT	
	1971	1970	1971	1970	1969	1971	1970	1969	1971	1970	1969	1971	1970	1969	1971	1970
STEWART SX71.....	N	T	136	121		23.2	26.5		99	58		24000	24000		13	6
SUPER-CROST 503.....	N		152			18.9			96			24000			66	
SUPER-CROST 7772.....	N		136			22.9			95			24000			16	
SUPER-CROST S65.....	N	B	137	134		20.8	25.1		96	90		24000	24000		36	6
SUPER-CROST S69.....	N	B	140	117	148	23.5	24.7	22.3	96	68	97	24000	24000	23995	36	26
SUPER-CROST S72.....	N		145			21.2			96			24000			43	
SUPER-CROST S79.....	N		154			24.4			91			24000			30	
SUPER-CROST S85.....	N	B	143	134		26.2	28.9		98	87		24000	22888		33	6
TODD M65.....	N		146			18.1			97			24000			86	
TODD M70.....	N	T	164	111	147	23.1	25.0	26.0	100	54	88	24000	23555	23776	16	20
TODD M55.....	N	T	120	94	120	20.3	22.1	19.4	91	59	99	23777	24000	23778	33	47
TRISLER T-919.....	N		89			22.5			100			24000			10	
TRISLER T-934.....	N		122			24.7			98			24000			26	
TRISLER T-940.....	N	N	116	124		21.3	29.8		90	76		24000	23555		46	5
TRISLER T-X-8.....	N		128			19.9			90			24000			50	
TRISLER T-X-9.....	N		125			20.0			97			24000			60	
TROJAN TXS 111.....	N		103			20.0			100			24000			50	
TROJAN TXS 112.....	N	T	135	111		21.7	23.4		95	54		24000	23555		36	27
TROJAN TXS 113.....	N		111			22.8			100			24000			23	
TROJAN TXS 115.....	N	N	127	126		21.7	29.7		98	88		24000	24000		56	5
TROJAN TXS 118.....	N		100			21.6			100			24000			23	
TROJAN TX 119.....	N		144			25.8			92			24000			26	
VAN HORN CAP 202.....	N		163			25.8			97			24000			23	
VAN HORN CAP 270.....	N		110			25.4			97			24000			20	
WHISNAND 840.....	N		125			22.2			94			24000			23	
WHISNAND 870.....	N		113			24.2			95			24000			23	
WHISNAND 874.....	N	T	154	115	146	22.0	24.7	23.2	93	25	84	24000	23777	23997	33	13
AVERAGE OF 1971 ENTRIES.....			132			22.1			95			24000			44	
L. S. D.....			29			1.5			8			N.S.			19	
C. V.....			13													

Table 9b. — Urbana High Lysine Trials

Entry	Total acre yield	Grain moisture	Erect plants	Plants per acre	Protein	Grams lysine per 100 g. of protein	Blight
	bu.	perct.	perct.		perct.	grams	perct.
<b>Opaque-2</b>							
Garnett-Ross CR 2.....	126	25.6	97	20035	9.4	3.8	10
I. F. S. 070-B013.....	117	24.2	100	20035	9.7	3.7	10
I. F. S. 070-B020.....	142	27.8	100	20213	10.4	3.7	10
I. F. S. 070-B046.....	132	22.9	99	20213	9.6	3.4	10
Lewis X38L.....	105	24.1	99	19149	10.1	3.4	20
P. A. G. 50001.....	89	23.2	98	19150	10.3	3.5	10
P. A. G. 50036.....	97	23.3	97	19149	9.3	3.7	20
Tracy T307 HyLy.....	59	20.7	95	17200	10.7	3.6	30
Trojan LTXS 102.....	82	20.1	96	19681	10.3	3.5	60
Trojan LTXS 112.....	122	24.7	100	18085	9.3	4.7	10
Trojan LTXS 119.....	108	25.4	100	18794	9.4	4.6	0
Check (ACCO UC 3600Tms).....	131	22.7	96	20213	9.8	2.9	50
Average of entries.....	109	23.7	98	19326	9.9	3.7	20
L. S. D.....	16	1.0	N.S.	N.S.	.4	.7	5
C. V.....	10	...	...	...	...	...	...
<b>Floury-2</b>							
I. F. S. 070-R005.....	140	19.5	95	21000	(a)	(a)	(a)
I. F. S. 070-R002.....	146	20.0	99	21000	(a)	(a)	(a)
P. A. G. 50101.....	130	20.9	100	21000	(a)	(a)	(a)

\* Data were incomplete at time of publication. They may be obtained from 305 Turner Hall, University of Illinois, Urbana, Illinois 61801.

















Table 13a. — Extreme Southern Illinois Upland: Carbondale, Increased Planting Rate  
(Planted at 22,000 plants per acre in 30-inch rows)

BRAND AND VARIETY	CYTOPLASMIC TYPE	TOTAL YIELD BU./ACRE			GRAIN MOISTURE PERCENT			ERECT PLANTS PERCENT			PLANTS PER ACRE			BLIGHT PERCENT	
		1971	1970	1969	1971	1970	1969	1971	1970	1969	1971	1970	1969	1971	1970
ACCO UC 8851.....	N	91			21.4			94			21838			20	
HOLDEN 1007.....	N	113			23.0			95			21838			10	
HOLDEN 1009.....	N	128			23.7			97			21514			10	
MOEWS M7372.....	N	N 116	45	85	20.2	24.6	17.8	86	95	51	22000	19328	21111	10	4
MOEWS SM721.....	N	T 98	30		22.2	25.1		96	92		21191	19800		7	17
MOEWS SM821 W.....	N	77			28.5			91			22000			8	
PIONEER 3222.....	N	111			22.0			98			21838			5	
PIONEER 3300.....	N	B 107	43	106	23.0	25.2	19.9	97	79	72	21838	18385	20222	10	20
PIONEER 3334.....	N	N 121	24		21.9	26.9		97	98		22000	20742		5	4
PIONEER 3368.....	N	106			21.3			94			22000			10	
PIONEER 3369A.....	N	B 87	66	92	21.2	25.8	18.6	100	91	77	22000	18700	20666	10	10
PIONEER 3376.....	N	B 102	52	62	21.1	25.3	18.3	97	97	57	21838	18857	22000	12	15
PIONEER 3390.....	N	90			18.4			94			21838			17	
PIONEER X1319.....	N	96			23.2			98			21514			7	
PIONEER X5349.....	N	U 136	29		26.7	29.2		97	93		22000	20742		0	5
PIONEER X5602.....	N	61			21.5			97			22000			12	
PRINCETON SX850.....	N	B 106	63		21.1	27.1		93	96		21838	20742		10	12
SUPER-CROST 7772.....	N	98			20.9			98			22000			10	
SUPER-CROST S72.....	N	110			20.4			98			22000			12	
SUPER-CROST S79.....	N	84			19.9			94			21676			17	
SUPER-CROST S85.....	N	B 111	43		22.8	25.9		99	90		21352	17600		10	12
AVERAGE OF 1971 ENTRIES.....		103			22.2			96			21800			10	
L. S. D.....		19			0.8			11			N.S.			8	
C. V.....		14													















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