

ILLINOIS EXPERIMENTAL HYBRID CORN TESTS

1948

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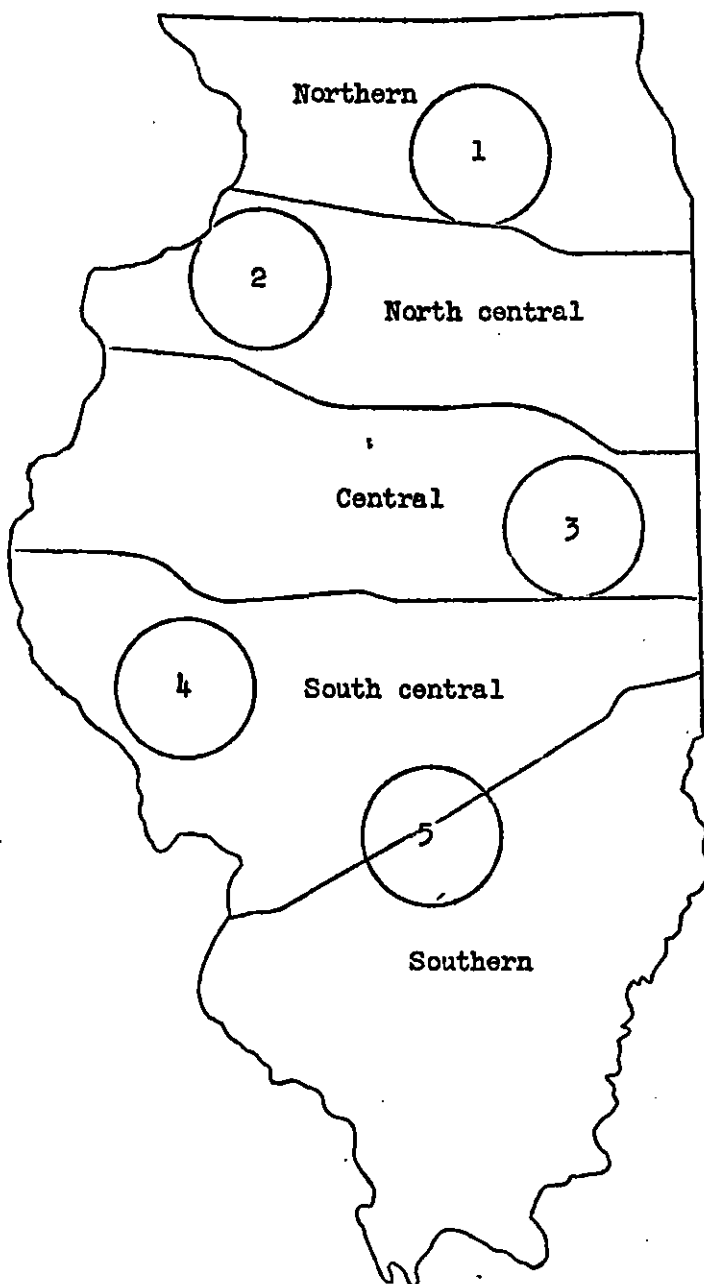
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This report summarizes the results of tests of experimental corn hybrids conducted in 1948 by the Illinois Agricultural Experiment Station. Data are presented from trials conducted in northern Illinois (DeKalb County), north central Illinois (Henry County), central Illinois (Champaign County), south central Illinois (Scott County) and southern Illinois (Fayette County). The locations of these tests are shown in the map below.

LOCATIONS OF ILLINOIS EXPERIMENTAL HYBRID CORN TESTS, 1948



The authors and the Experiment Station acknowledge the cooperation of C. D. Ford, Geneseo; Royal Oakes, Bluffs; C. H. Farnham, Urbana; and P. E. Johnson, Newton, for providing land for some of these tests. The valuable assistance of Professors J. B. Andrews and E. R. Leng, W. E. Robbins, Herbert Hayes and Kenneth Williams in conducting these trials is also appreciated.

All plots in these tests were planted and thinned by hand. Two plants per hill were left in the experiments at Brownstown (south central Illinois) and three plants per hill in all other tests. With the exception of Urbana, the material was compared in 2 x 5-hill plots arranged in a randomized block design. Plots at Urbana were 2 x 8-hills in size. All entries were replicated three times. At harvest, the corn from one or two replications from each test at each location was shelled to determine the shelling percentage. Moisture determinations were made on samples of the shelled grain by using a Steinlite moisture meter. Yields were computed on the basis of 15.5 percent moisture content, the maximum allowable for No. 2 shelled corn, and were corrected for missing hills. Percentages of erect plants at harvest, stand, plant and ear height were determined by actual counts and measurements on all replications of each test for which such data are presented. The number of ears per hundredweight and number of ears per plant were determined by actual counts and weights on the replications from which shelling percentage and moisture were determined.

In the tables appearing on the following pages, the entries in each test are listed in the order of total yield in bushels per acre, beginning with the highest.

Pedigrees of Hybrids

The following list contains the pedigrees of the State Experiment Station and U. S. hybrids whose performance is shown in this report. The inbred line with the lowest number in each hybrid has been listed first. For example, the pedigree of a hybrid involving the single crosses (6 x 1) and (2 x 4) has been written (1 x 6) (2 x 4) for convenience. Therefore, the order of the single crosses and the lines within each single cross do not necessarily indicate which should be used as seed or pollen parent in the production of a hybrid.

The letter "A" or "B" following an Illinois hybrid number indicates that the combination of inbred lines making up the hybrid has been rearranged or "permuted." For example, if the original pedigree of an Illinois hybrid is (1 x 6) (2 x 4), the pedigree of the number followed by the letter "A" means that the hybrid was put together (1 x 2) (4 x 6). The pedigree of the number followed by the letter "B" would be (1 x 4) (2 x 6). A difference in reciprocals is not recognized in this method.

Illinois yellow hybrids are numbered consecutively below two thousand, while white hybrids are numbered in the two thousand series. Illinois white hybrid numbers usually are followed by the letter "W."

When a dash (-) followed by a number occurs as a part of an Illinois hybrid number, it means that a tested related line has been substituted for one of the inbred lines involved in the original hybrid. For example, the pedigree of Illinois 972 is (WF9xHy) (L317x701). Illinois 972A is (WF9x701) (L317xHy), and Illinois 972B is (WF9xL317) (701xHy). Inbred 07, a close relative of 701, was found to be similar in combining value but to contribute a better kernel type and therefore was substituted for 701 in Illinois 972. Thus Illinois 972A-1 would be (07xWF9) (L317xHy). The figure 1 indicates the first substitution of a related line in a hybrid; figure 2, the second substitution; and so on.

ILLINOIS YELLOW HYBRIDS

Hybrid number	Pedigree	Tested in field	Performance in table number
21	(WF9 x 38-11) (187-2 x Hy)	2,3,4	4,7,9,10,12,14
101	(WF9 x M14) (W26 x 187-2)	1	1,2,3
200	(K4 x L317) (WF9 x 38-11)	4,5	10,11,12,13
274-1	(Oh7 x 187-2) (WF9 x Hy)	2,3	4,7,9
448	(K4 x L317) (38-11 x Kys)	4,5	10,11,12,13
751	(WF9 x Hy) (90 x A)	1	1,2,3
972A-1	(Oh7 x WF9) (L317 x Hy)	3	7,8,9,14
1246	(WF9 x 38-11) (R61 x (187-2))	2	4
1275	(WF9 x M14) (W32 x 4226)	1	1,2,3
1277	(WF9 x M14) (187-2 x I.205)	1,2	1,2,3,4,5,6
1279	(WF9 x M14) (187-2 x A375)	1	1,2,3
1280	(WF9 x M14) (187-2 x Os420)	1,2	1,2,3,4,5,6
1281	(WF9 x M14) (A374 x A375)	1	1,2,3
1289	(WF9 x I.205) (M14 x W22)	1,2	1,2,3,4,5,6
1293	(WF9 x Hy2) (M14 x I.205)	1	1,2,3
1327	(Oh7 x 38-11) (WF9 x Hy2)	3	7,9,14
1332-1	(Oh7A x Hy2) (WF9 x 38-11)	2,3	7
1337	(WF9 x 38-11) (R61 x Hy2)	3	7,9,14
1349	(38-11 x 940) (K155 x K201C)	4	10
1372	(N6 x W22) (WF9 x M14)	2	4,5
1375	(N6 x Oh51A) (WF9 x M14)	1,2	1,2,4,5
1376	(N6 x I.205) (WF9 x M14)	1	1,2
1416	(N6 x Oh7) (WF9 x Hy2)	2,3	4,7,9
1417	(N6 x P8) (WF9 x Hy2)	3	7,9
1421	(Oh7 x P8) (WF9 x Hy2)	3,4	7,9,10,12
1422	(Oh7 x 5120B) (WF9 x Hy2)	3,4	7,9,10,12
1423	(P8 x 38-11) (WF9 x Hy2)	3,4	7,9,10,12
1426	(WF9 x Hy2) (38-11 x I.159L1)	3	7,9
1445A	(K4 x 38-11) (CI.7 x CI.21E)	4	10,13
1453A	(K4 x T8) (CI.21E x 38-11)	4	10
1458B	(K4 x K155) (CI.21E x 38-11)	4	10
1459	(K4 x 38-11) (CI.21E x K201C)	4	10,13
1459A	(K4 x CI.21E) (38-11 x K201C)	4	10
1481	(B9 x Oh51A) (W22 x A)	1	1
1482	(B8 x Oh51A) (W22 x A)	1	1
1483	(B8 x B9) (W22 x A)	1	1
1484	(B8 x B9) (W22 x Oh51A)	1	1
1485	(W3 x W22) (B8 x Oh51A)	1	1
1486	(WR3 x W22) (B9 x Oh51A)	1	1
1491	(N6 x WF9) (W22 x Oh51A)	1,2	1,4
1492	(W8 x WF9) (W22 x Oh28)	2	4
1493	(WF9 x I.205) (W22 x Oh28)	1,2	1,4
1494	(WF9 x Oh51A) (W22 x Oh28)	1,2	1,4
1495	(N6 x WF9) (W8 x W22)	2	4
1497	(WF9 x M14) (W22 x Oh51A)	1,2	1,4
1499	(WF9 x I.205) (W22 x Oh51A)	2	4
1503	(B8 x A73) (M14 x I289)	1,2	1,4

ILLINOIS YELLOW HYBRIDS (cont.)

Hybrid number	Pedigree	Tested in field	Performance in table number
1504	(N6 x B8) (A73 x I289)	2	4
1505	(B8 x A73) (Ny43-3 x I289)	2	4
1506	(N6 x I289) (B8 x A73)	2	4
1507	(B8 x R51) (M14 x A73)	1,2	1,4
1508	(L7 x L17) (L12 x Oh28)	1,2	1,4
1509	(P8 x I304A) (WF9 x Hy2)	3	7
1510	(B2 x Hy2) (P8 x I304A)	3	7
1511	(WF9 x Hy2) (38-11 x I304A)	3	7
1512	(B2 x Hy2) (WF9 x I304A)	3	7
1513	(B2 x Hy2) (38-11 x I304A)	3	7
1514	(N6 x I304A) (38-11 x Hy2)	3	7
1515	(WF9 x 38-11) (B10 x Hy)	3	7
1516	(H9 x Hy) (WF9 x 38-11)	3	7
1517	(N6 x P8) (Oh7 x Hy2)	3	7
1518	(B2 x WF9) (P8 x I304A)	3	7
1519	(B2 x Hy2) (N6 x P8)	3	7
1520	(WF9 x 38-11) (W86 x Hy)	3	7
1521	(T8 x CI.21E) (38-11 x K201C)	4	10
1521A	(T8 x 38-11) (CI.21E x K201C)	4	10
1521B	(T8 x K201C) (CI.21E x 38-11)	4	10
1522	(P8 x J47) (I.159 x Hy2)	3	7
1523	(Oh40B x J47) (I.159 x Hy2)	3	7
1524	(P8 x Oh40B) (J47 x I.159)	3	7
1525	(WF9 x J47) (J30 x Hy2)	3	7
1526	(J30 x Oh40B) (J47 x Hy2)	3	7
1527	(P8 x J30) (J47 x Hy2)	3	7
1528	(P8 x Oh40B) (J47 x Hy2)	3	7
1528B	(P8 x Hy2) (Oh40B x J47)	3	7
1529	(WF9 x J47) (Oh40B x Hy2)	3	7
1531	(P8 x Hy2) (J47 x I317)	3	7
1532	(Oh7 x P8) (I.159 x Hy2)	3	7
1533	(P8 x WF9) (J47 x Hy2)	3	7
1534	(Oh7 x Oh40B) (I.159 x Hy2)	3	7
1536	(T8 x CI.21E) (38-11 x Kys)	4	10
1537	(T8 x CI.21E) (38-11 x K155)	4	10
1537B	(T8 x K155) (CI.21E x 38-11)	4	10
1538	(CI.7 x T8) (CI.21E x 38-11)	4	10
1539A	(CI.7 x 38-11) (CI.21E x K201C)	4	10
1539B	(CI.7 x K201C) (CI.21E x 38-11)	4	10
1540	(CI.21E x 38-11) (K155 x K201C)	4	10
1541A	(CI.7 x 38-11) (CI.21E x K155)	4	10
1541B	(CI.7 x K155) (CI.21E x 38-11)	4	10
1554	(WF9 x 38-11) (R59 x Hy)	3	7

ILLINOIS WHITE HYBRIDS

Hybrid number	Pedigree	Tested in field	Performance in table number
2159W	(H21 x K64) (Ky27 x CI.61)	5	11
2159AW	(H21 x Ky27) (CI.61 x K64)	5	11
2190W	(K6 x H21) (Ky49 x K64)	3,5	7,8,11
2201W	(H21 x CI.61) (R30 x K64)	5	11
2207W	(R30 x CI.61) (33-16 x K64)	5	11
2209W	(R30 x K64) (33-16 x CI.61)	5	11
2214BW	(H21 x R30) (Ky27 x K64)	5	11
2216W	(H21 x CI.61) (Ky27 x K64)	5	11
2217W	(H21 x R30) (33-16 x K64)	5	11
2218BW	(H21 x K64) (Ky27 x 33-16)	5	11
2219W	(K6 x Ky27) (H21 x K64)	5	11
2220W	(H21 x Ky27) (R30 x CI.61)	5	11
2221W	(K6 x CI.61) (H21 x R30)	5	11
2222W	(K6 x CI.61) (H21 x K64)	5	11
2223W	(H21 x Ky27) (33-16 x CI.61)	5	11
2224W	(K6 x CI.61) (H21 x Ky27)	5	11

MISCELLANEOUS HYBRIDS

U.S. CB1	(P8 x H10) (I304A x Hy)	3	7
U.S. CB6	(P8 x SSS278-28) (I304A x Hy)	3	7
Iowa 939	(I.205 x I289) (Os420 x Os426)	2	4
Kans. 2275W	(Ky27 x 33-16) (K55 x K64)	5	11
Ohio M15	(W23 x A) (Oh27 x Oh51A)	1	1
U.S. 13	(WF9 x 38-11) (I317 x Hy)	2,3,4,5	4,7,8,9,10,12, 13,14
U.S. 521W	(Ky27 x K60) (Ky49 x K64)	3,5	7,8,11
U.S. 523W	(Ky27 x Ky49) (K55 x K64)	5	11
U.S. 527W	(Ky49 x Ky122) (K60 x K64)	5	11
U.S. 537W	(Mo22 x Ky27) (K55 x K64)	3,5	7,8,11
U.S. 541W	(Mo22 x K64) (Ky27 x R30)	5	11

Table 1.--VERY EARLY YELLOW DOUBLE CROSSES (Ill. 751 Maturity):
DeKalb, 1948
(Northern Illinois) (Average of three replications)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Stand	Height		Ears per cwt.	Ears per plant
							Plant	Ear		
		bu.	%	%	%	%	ft.	in.	no.	no.
1	Ill.1508	102	19	78	100	100	8.8	44	148	1.00
2	Ill.1493	101	19	75	100	99	8.7	39	147	.93
3	Ill.1277	99	19	78	99	100	8.8	40	141	.97
4	Ill.1279	97	24	78	100	98	8.8	42	149	1.00
5	Ill.1289	96	23	76	100	99	9.0	40	135	1.00
6	Ill.1281	95	20	77	99	98	8.8	42	183	.97
7	Ill.1375	94	22	78	100	100	8.5	39	169	1.00
8	Ill.1280	94	28	78	97	98	8.8	40	152	1.00
9	Ill.1376	90	27	79	100	98	8.7	37	159	.97
10	Ill.1497	90	22	77	100	99	8.5	40	173	1.00
11	Ill.751	90	24	76	100	98	8.7	39	149	.97
12	Ill.101	88	26	78	100	100	8.8	37	169	.97
13	Ill.1491	87	27	79	100	100	8.8	37	173	1.00
14	Ill.1494	87	23	77	98	100	8.8	40	169	.97
15	Ill.1293	85	32	78	99	98	8.7	41	152	.97
16	Ill.1503	83	22	81	99	100	8.5	39	194	1.00
17	Ill.1481	82	26	79	100	99	9.0	45	181	.97
18	Ill.1484	80	22	80	100	101	8.5	44	191	1.03
19	Ill.1485	79	22	81	97	99	8.5	42	200	.97
20	Ill.1482	79	27	80	100	100	8.7	43	186	1.00
21	Ill.1507	78	24	82	98	100	8.5	38	210	.97
22	Ill.1483	75	27	80	99	101	8.7	44	204	.97
23	Ill.1486	74	25	80	99	99	9.0	43	199	1.00
24	Ill.1275	73	23	79	98	101	8.3	40	181	1.00
25	Oh.M15	68	26	78	99	100	8.5	42	194	.87
	Average	87	24	78	99	99	8.7	41	172	.98

A difference of less than 11 bushels between the yields of any two hybrids in this table is not significant.

Table 2.--EARLY YELLOW DOUBLE CROSSES: (I11.751 Maturity) Two-Year Averages
Aurora, 1947; DeKalb, 1948 (Northern Illinois)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Lodged plants		Stand	Height	
						Root	Stalk		Plant	Ear
		bu.	%	%	%	%	%	%	ft.	in.
1	I11.1277	94	22	80	86	6	8	98	8.8	40
2	I11.1375	93	22	80	88	2	10	100	8.7	40
3	I11.1279	93	23	79	86	1	13	98	8.8	41
4	I11.1281	91	21	78	89	1	10	99	8.5	39
5	I11.1289	91	24	77	87	0	13	99	8.9	39
6	I11.1376	89	26	79	86	5	9	99	8.6	39
7	I11.1280	89	25	79	85	1	14	99	8.8	40
8	I11.751	87	23	78	75	0	25	99	8.8	41
9	I11.101	87	24	80	88	1	11	100	8.8	38
10	I11.1293	85	28	78	81	1	18	97	8.6	41
11	I11.1275	78	23	79	83	6	11	101	8.6	41
	Average	89	24	79	85	2	13	99	8.7	40

A difference of less than 7 bushels between the yields
of any two hybrids in this table is not significant.

Table 3:--EARLY YELLOW DOUBLE CROSSES: (Ill.751 Maturity)
 Three-Year Averages - Aurora, 1946 and 1947; DeKalb, 1948
 (Northern Illinois)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Lodged plants		Stand
						Root	Stalk	
		bu.	%	%	%	%	%	%
1	Ill.1279	90	22	80	87	1	12	95
2	Ill.1281	88	21	79	91	3	6	97
3	Ill.1289	88	23	78	91	0	9	96
4	Ill.1277	88	21	80	89	4	7	96
5	Ill.1280	87	24	80	88	1	11	98
6	Ill.751	84	23	78	77	0	23	97
7	Ill.101	83	23	80	88	1	11	96
8	Ill.1293	83	26	79	85	1	14	95
9	Ill.1275	78	22	80	86	4	10	98
	Average	85	23	79	87	2	11	96

A difference of less than 5 bushels between the yields
 of any two hybrids in this table is not significant.

Table 4.--EARLY YELLOW DOUBLE CROSSES (Ill.21 Maturity):
Geneseo, 1948 (North Central Illinois)
(Averages of three replications)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Stalk lodged	Stand	Height		Ears per cwt.	Ears per plant
								Plant	Ear		
		bu.	%	%	%	%	%	ft.	in.	no.	no.
1	Ill.21	117	22	79	99	1	100	9.7	50	137	.97
2	Ill.1508	114	20	79	94	6	100	9.0	41	150	1.03
3	U.S.13	113	24	78	98	2	100	10.0	52	135	.97
4	Ill.1280	109	22	80	96	4	99	9.0	40	134	.90
5	Ill.1375	108	21	80	98	2	99	8.8	36	153	1.00
6	Ill.1492	106	21	77	98	2	100	9.2	41	133	1.00
7	Ill.1416	104	24	80	100	0	100	8.5	39	140	1.00
8	Ill.1493	104	21	79	98	2	99	9.3	40	169	.97
9	Ill.1289	103	21	78	97	3	100	9.0	41	155	.97
10	Ill.1246	102	21	79	93	7	100	9.3	49	132	.87
11	Ill.1277	101	21	80	98	2	99	9.2	39	147	.96
12	Ill.1497	100	20	79	98	2	100	8.8	35	205	1.33
13	Ill.1491	100	19	82	99	1	100	9.2	42	165	1.03
14	Ill.1494	100	20	78	98	2	101	9.2	41	159	1.00
15	Ia.939	98	19	82	98	2	102	9.3	45	177	.93
16	Ill.274-1	96	22	80	93	7	100	9.0	44	150	1.00
17	Ill.1503	96	17	83	93	7	100	9.0	39	179	1.00
18	Ill.1372	94	21	80	99	1	100	8.5	35	188	.97
19	Ill.1499	94	21	78	91	9	100	9.2	42	146	.90
20	Ill.1495	93	21	80	97	3	99	9.0	36	153	1.00
21	Ill.1507	91	17	84	92	8	100	8.3	36	183	.93
22	Ill.1504	91	18	82	91	9	100	8.5	42	192	1.00
23	Ill.1506	91	18	82	88	12	100	8.5	41	162	.97
24	Ill.1505	82	17	83	82	18	100	9.0	47	190	.87
	Average	100	20	80	95	5	100	9.0	41	161	.98

A difference of less than 11 bushels between the yields
of any two hybrids in this table is not significant.

Table 5.--EARLY YELLOW DOUBLE CROSSES (111.21 Maturity):
Two-Year Averages - Aurora, 1947; Geneseo, 1948
(North Central Illinois)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Lodged plants			Height	
						Root	Stalk	Stand	Plant	Ear
		bu.	%	%	%	%	%	%	ft.	in.
1	Ill.1375	100	22	81	87	2	11	100	8.8	38
2	Ill.1280	97	22	80	85	1	14	99	8.9	40
3	Ill.1277	96	23	80	86	6	8	98	9.0	40
4	Ill.1289	95	23	78	85	0	15	99	8.9	40
5	Ill.1372	89	22	79	85	1	14	100	8.4	37
Average		95	22	80	86	2	12	99	8.8	39

A difference of less than 7 bushels between the yields of any two hybrids in this table is not significant.

Table 6.--EARLY YELLOW DOUBLE CROSSES (111.21 Maturity):
Three-Year Averages - Aurora, 1946 and 1947; Geneseo, 1948
(North Central Illinois)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Lodged plants		
						Root	Stalk	Stand
		bu.	%	%	%	%	%	%
1	Ill.1280	92	22	80	88	1	11	98
2	Ill.1289	90	22	79	90	0	10	97
3	Ill.1277	89	22	80	89	4	7	96
Average		90	22	80	89	2	9	97

A difference of less than 5 bushels between the yields of any two hybrids in this table is not significant.

Table 7.-- MIDSEASON DOUBLE CROSSES (U.S. 13 Maturity): Urbana, 1948
(Central Illinois) (Averages of three replications)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Days to half-silk	Moisture at harvest	Shelling	Erect plants	Stand	Ear height	Ears per cwt.	Ears per plant	Left by mechanical picker	
											Ears	Husk per ear
		bu.		%	%	%	%	in.	no.	no.	%	gms.
1	I11.2190(W)	138	68	26	79	98	99	58	106	1.02	1	9
2	CBI	138	66	23	83	96	101	56	129	1.11	1	5
3	I11.1514	138	66	22	81	99	98	53	111	1.00	0	4
4	I11.1512	138	63	22	81	99	99	51	112	1.00	1	7
5	CB6	137	65	23	82	95	97	55	118	1.05	0	6
6	I11.1518	137	63	23	81	99	97	50	109	.99	1	7
7	U.S.521W	136	70	23	80	98	100	59	118	1.03	1	9
8	I11.1509	135	64	23	81	99	99	54	107	.96	1	4
9	I11.1522	135	65	23	79	97	99	58	109	.99	1	6
10	I11.1511	134	66	23	81	99	97	54	113	1.00	1	2
11	I11.1534	133	64	22	81	96	98	49	127	1.08	1	4
12	I11.1531	133	66	25	80	96	98	59	116	1.06	1	10
13	I11.1426	133	64	22	78	97	97	54	118	1.04	1	3
14	I11.1510	132	66	24	81	99	99	55	112	.99	1	8
15	I11.1525	132	64	23	79	99	99	49	116	1.03	1	5
16	I11.1423	131	66	22	81	99	96	53	120	1.01	1	2
17	I11.1515	131	66	25	78	95	101	51	112	.99	1	4
18	I11.1533	131	66	25	80	100	100	52	113	.99	0	5
19	I11.1513	131	67	22	80	95	99	55	113	.97	1	3
20	I11.1422	131	66	23	79	99	102	53	125	1.06	1	4
21	I11.1528B	130	64	23	80	95	100	51	119	1.01	0	8
22	I11.1332-1	130	67	23	80	93	94	53	114	.99	0	3
23	I11.1523	129	63	23	79	98	95	49	118	1.06	0	7
24	I11.1337	129	67	22	81	94	99	54	121	1.01	1	2
25	I11.1532	128	67	21	81	99	101	52	130	1.04	0	3
26	I11.1421	128	66	22	82	99	98	48	128	1.05	1	2
27	I11.1327	127	65	22	80	99	94	47	124	1.05	1	2
28	I11.1524	127	64	23	80	95	101	46	123	1.01	0	6
29	I11.1417	126	64	24	80	99	100	43	123	1.02	1	6
30	I11.1528	126	64	23	80	96	99	46	117	.98	2	8

Table 7 (cont.)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Days to half-silk	Moisture at harvest	Shelling	Erect plants	Stand	Ear height	Ears per cwt.	Ears per plant	Left by mechanical picker	
											Ears	Husk per ear ^{a/}
		bu.		%	%	%	%	in.	no.	no.	%	gms.
31	I11.1520	126	65	21	80	98	99	48	125	1.01	0	2
32	I11.972A-1	126	65	22	81	96	98	48	133	1.09	3	3
33	U.S.13	125	65	21	80	97	100	53	129	1.03	0	1
34	I11.1554	125	66	23	80	94	97	52	119	.99	2	6
35	I11.1519	124	64	22	82	96	100	47	132	1.03	1	5
36	I11.1517	124	64	21	83	97	99	51	164	1.25	1	2
37	I11.1516	123	65	24	79	96	97	52	119	1.01	4	2
38	I11.21	123	66	22	80	99	98	53	123	.99	0	2
39	U.S.537W	122	74	27	81	98	99	55	120	1.00	1	17
40	I11.1527	121	65	23	80	97	99	50	123	.99	1	3
41	I11.1526	120	63	26	80	96	99	50	116	.95	1	5
42	I11.1529	120	64	22	80	98	99	47	130	1.01	0	4
43	I11.274-1	118	64	21	81	98	99	45	136	1.02	1	4
44	I11.1416	116	63	22	80	98	100	47	136	1.01	0	5
	Average	129	65	23	80	97	99	51	121	1.02	1	5

A difference of less than 12 bushels between the yields of any two hybrids in this table is not significant.

a/ A difference of less than 3 gms. between the husks per ear of any two hybrids in this table is not significant.

Table 8.--MIDSEASON DOUBLE CROSSES (U.S. 13 Maturity):
Two-Year Averages - Urbana and Bluffs, 1947; Urbana, 1948
(Central and South Central Illinois)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Days to half-silk	Moisture at harvest	Shelling	Erect plants	Lodged plants		Stand	Ear height	Ears per cwt.	Ears per plant
							Root	Stalk				
		bu.		%	%	%	%	%	%	in.	no.	no.
1	Ill.2190W	115	77	23	79	90	2	8	97	55	140	.94
2	U.S.521W	115	79	22	82	89	2	9	98	57	159	.98
3	Ill.972A-1	107	75	19	82	91	2	8	98	47	177	1.04
4	U.S.537W	107	82	23	80	91	2	8	98	55	155	.98
5	U.S.13	106	75	20	81	86	3	11	98	51	173	1.00
Average		110	78	21	81	89	2	9	98	53	161	.99

A difference of less than 10 bushels between the yields of any two hybrids in this table is not significant.

Table 9.--MIDSEASON YELLOW DOUBLE CROSSES (U.S. 13 Maturity):
Two-Year Averages - Urbana and Bluffs, 1947; Urbana, 1948
(Central and South Central Illinois)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Days to half-silk	Moisture at harvest	Shelling	Erect plants	Lodged plants		Stand	Ear height	Ears per cwt.	Ears per plant
							Root	Stalk				
		bu.		%	%	%	%	%	%	in.	no.	no.
1	Ill.1426	110	73	20	79	95	0	5	97	50	161	.99
2	Ill.1422	110	76	21	80	94	2	4	99	49	154	1.00
3	Ill.1417	109	73	21	82	88	2	10	98	44	166	1.00
4	Ill.1421	109	75	20	81	92	1	7	99	47	168	1.01
5	Ill.972A-1	108	75	20	82	89	2	9	98	48	174	1.04
6	Ill.274-1	107	74	19	82	89	4	7	98	45	172	1.02
7	U.S.13	107	75	20	80	88	2	10	97	50	168	.99
8	Ill.1327	106	75	19	81	90	1	9	96	48	174	1.02
9	Ill.1423	106	76	20	84	94	0	6	97	50	170	.96
10	Ill.1337	105	76	20	81	90	1	9	98	50	175	1.00
11	Ill.1416	105	73	20	82	92	2	6	98	45	178	1.01
12	Ill.21	102	75	18	81	91	0	9	98	51	177	.96
Average		107	75	20	81	90	1	9	98	48	169	1.00

A difference of less than 9 bushels between the yields of any two hybrids in this table is not significant.

Table 10.--LATE YELLOW DOUBLE CROSSES (I11.448 Maturity):
Bluffs, 1948 (South Central Illinois)
(Averages of three replications)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Lodged plants		Stand	Height		Ears per cwt.	Ears per plant
						Root	Stalk		Plant	Ear		
		bu.	%	%	%	%	%	%	ft.	in.	no.	no.
1	I11.1541A	131	23	80	95	0	5	92	10.8	64	126	1.31
2	I11.1537	130	20	81	86	7	7	97	10.7	62	130	1.03
3	I11.1540	128	15	80	94	3	3	81	10.7	60	--	--
4	I11.21	121	15	84	81	5	14	98	10.0	53	139	.96
5	I11.1349	120	18	83	93	6	1	97	10.2	56	129	1.00
6	U.S.13	120	16	82	91	0	9	99	10.0	45	105	.80
7	I11.448	119	18	81	84	0	16	99	10.7	54	142	1.10
8	I11.1539A	118	22	81	92	4	4	87	10.2	56	126	1.22
9	I11.1521B	115	24	77	81	10	9	91	10.7	63	132	1.28
10	I11.1541B	114	22	81	76	15	9	87	10.5	64	119	1.12
11	I11.1445A	112	23	81	90	6	4	91	10.5	56	116	1.00
12	I11.1422	112	17	80	100	0	0	94	9.8	44	136	1.00
13	I11.1538	111	22	80	79	7	14	92	11.0	62	120	1.03
14	I11.1536	110	21	79	91	2	7	94	10.2	59	137	1.00
15	I11.200	109	16	84	74	6	20	90	10.5	56	143	1.00
16	I11.1537B	108	23.0	79.6	99	0	1	78	10.5	59	120	1.37
17	I11.1453A	107	22.0	81.5	75	12	13	93	10.3	54	145	1.20
18	I11.1539B	107	23.0	82.4	82	14	4	84	10.2	57	124	1.08
19	I11.1423	107	22.2	84.5	93	0	7	100	10.2	51	145	.97
20	I11.1521A	105	20.5	79.3	77	19	4	94	10.0	58	122	.93
21	I11.1459A	105	21.8	78.6	84	14	2	94	10.7	63	124	.93
22	I11.1421	101	16.4	85.5	67	33	0	92	9.8	48	157	1.04
23	I11.1459	100	25.2	82.3	67	26	7	82	10.8	59	141	1.40
24	I11.1521	99	22.9	79.8	83	11	6	93	10.3	62	126	.93
25	I11.1458B	94	21.0	80.8	83	13	4	92	10.5	58	128	.80
	Average	112	20	81.0	85	8	7	92	10.3	57	131	1.06

A difference of less than 20 bushels between the yields of any two hybrids in this table is not significant.

Table 11.--LATE WHITE AND STANDARD YELLOW DOUBLE CROSSES (Ill.448 Maturity):
Brownstown, 1948 (Southern Illinois)
(Averages of three replications)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Lodged plants		Stand	Height		Ears per cwt.	Ears per plant
						Root	Stalk		Plant	Ear		
		bu.	%	%	%	%	%	%	ft.	in.	no.	no.
1	U.S.541(W)	115	23	80	97	0	3	107	8.8	43	144	1.57
2	Ill.2224(W)	114	19	81	98	0	2	100	9.5	45	142	1.45
3	Ill.2159(W)	114	21	81	98	2	0	97	9.5	42	131	1.44
4	Ill.2220(W)	113	21	81	97	0	3	100	9.0	42	118	1.21
5	Ill.2207(W)	113	19	80	98	0	2	97	9.3	43	148	1.55
6	Ill.2217(W)	113	21	82	100	0	0	102	9.2	42	114	1.19
7	Ill.2214B(W)	112	21	82	100	0	0	100	9.0	40	131	1.40
8	Ill.2201(W)	111	23	80	100	0	0	98	9.2	42	127	1.40
9	Ill.2223(W)	111	19	80	98	0	2	102	9.0	40	145	1.38
10	Ill.2190(W)	111	20	77	96	0	4	93	9.7	44	125	1.37
11	Ill.2216(W)	109	21	80	98	2	0	98	9.2	41	124	1.25
12	U.S.523(W)	107	21	82	90	7	3	100	9.2	39	132	1.40
13	Ill.2218B(W)	109	20	83	95	0	5	97	9.0	37	147	1.56
14	U.S.527(W)	108	22	77	94	0	6	103	9.8	45	130	1.23
15	U.S.537(W)	106	22	81	97	0	3	98	9.0	38	138	1.50
16	Ill.2159A(W)	106	21	80	97	0	3	100	9.5	44	141	1.50
17	Ill.2209(W)	104	20	80	100	0	0	98	9.0	41	126	1.26
18	Ill.2219(W)	104	21	81	90	0	10	98	9.0	43	136	1.47
19	Ill.448	103	20	80	77	0	23	100	10.0	46	141	1.40
20	Ill.200	103	18	81	97	0	3	98	10.0	43	166	1.60
21	Ill.2221(W)	103	21	76	98	2	0	97	9.3	44	119	1.30
22	U.S.521(W)	102	19	80	95	2	3	100	9.2	43	135	1.32
23	Ill.2222(W)	101	22	77	98	0	2	102	9.3	42	129	1.33
24	Kans.2275	95	19	82	89	8	3	98	8.5	35	130	1.17
25	U.S.13	93	18	81	100	0	0	97	8.7	39	121	1.05
	Average	107	21	80	96	1	3	99	9.2	42	134	1.37

A difference of less than 9 bushels between the yields
of any two hybrids in this table is not significant.

Table 12.--LATE YELLOW DOUBLE CROSSES (Ill.448 Maturity):
Two-Year Averages - Urbana and Bluffs, 1947; Bluffs, 1948
(South Central Illinois)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Lodged plants		Stand	Height		Ears per cwt.	Ears per plant
						Root	Stalk		Plant	Ear		
		bu.	%	%	%	%	%	%	ft.	in.	no.	no.
1	U.S.13	104	17	82	85	2	13	96	9.5	46	156	.87
2	Ill.21	102	15	83	82	3	15	98	9.6	51	185	.95
3	Ill.1422	100	18	80	95	2	3	95	8.3	44	159	.97
4	Ill.200	96	17	83	71	8	21	94	9.9	52	177	.95
5	Ill.1421	96	18	83	76	18	6	96	9.2	47	183	1.00
6	Ill.448	94	19	79	73	6	21	97	10.0	53	184	.98
7	Ill.1423	94	20	86	92	0	8	99	9.6	49	183	.94
	Average	98	18	82	82	6	12	96	9.4	49	175	.95

A difference of less than 12 bushels between the yields of any two hybrids in this table is not considered significant.

Table 13.--LATE YELLOW DOUBLE CROSSES (Ill.448 Maturity):
Two-Year Averages - Urbana and Bluffs, 1947; Bluffs, 1948
(Central and South Central Illinois)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Moisture at harvest	Shelling	Erect plants	Lodged plants		Stand	Height		Ears per cwt.	Ears per plant
						Root	Stalk		Plant	Ear		
		bu.	%	%	%	%	%	%	ft.	in.	no.	no.
1	U.S.13	103	17	82	83	3	14	98	9.7	47	161	.88
2	Ill.1445A	100	21	80	80	8	12	94	10.0	55	152	.95
3	Ill.448	93	19	80	69	1	30	97	10.2	53	197	1.02
4	Ill.200	92	17	83	73	4	23	92	9.5	51	193	.97
5	Ill.1459	91	22	81	67	17	16	89	10.0	58	172	1.15
	Average	96	19	81	74	7	19	94	9.9	53	175	.99

A difference of less than 13 bushels between the yields of any two hybrids in this table is not significant.

Table 14.--LATE YELLOW DOUBLE CROSSES (Ill.448 Maturity):
 Three-Year Averages - Urbana and Bluffs, 1946 and 1947; Urbana, 1948
 (South Central Illinois)

Rank in yield	Kind of corn	Acre yield of shelled corn (15.5%)	Days to half-silk	Moisture at harvest	Shelling	Erect plants	Lodged plants		Stand	Ear height	Ears per cwt.	Ears per plant
							Root	Stalk				
		bu.		%	%	%	%	%	%	in.	no.	no.
1	U.S.13	111	72	20	82	87	1	12	97	50	167	.97
2	Ill.1327	110	72	20	82	90	1	9	95	46	169	1.00
3	Ill.972A-1	110	71	20	83	87	5	8	97	48	170	1.03
4	Ill.1337	108	73	21	82	87	2	11	98	50	172	.99
5	Ill.21	105	73	19	83	89	1	10	91	51	169	.94
	Average	109	72	20	82	88	2	10	96	49	169	.99

A difference of less than 7 bushels between the yields of any two hybrids in this table is not significant.