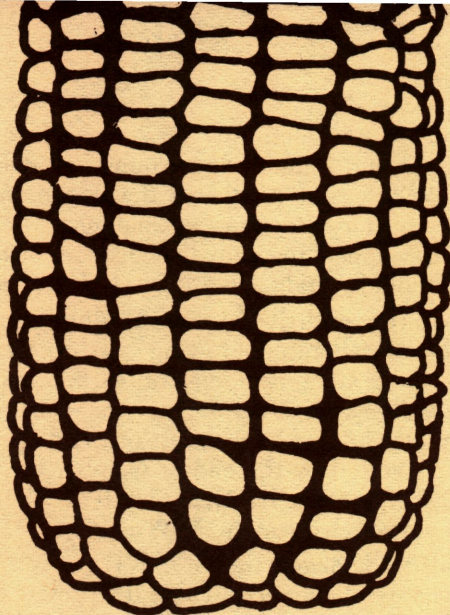




HYBRIDS COMPARED 1971

**COOPERATIVE EXTENSION
MICHIGAN STATE UNIVERSITY**

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Highest yielding corn hybrids in the 1970 trials produced 30 bushels more per acre than the average of 267 hybrids tested and 62 bushels more than the lowest yielding hybrids tested (Table A, page 4). The respective yields were 139, 110 and 77 for the highest, average and lowest yielding hybrids at the 14 testing locations. The driest hybrids at harvest contained 4% less moisture than the average and 7% less moisture than the wettest hybrids tested. Differences among hybrids in moisture content were less than usual in 1970 due to earlier maturity and more rapid field drying. Stalk breakage averaged 25%, 11% and 2% for hybrids with highest, average and lowest amounts of stalk lodging.

Two groups of entries are included in the trials:

(2) **Extension entries**—Some seed companies do not participate with voluntary fee-assessed entries and others do not include some of their hybrids that are

No distinction between, or identification of, Voluntary and Extension entries is made in reporting the results.



Corn Maturity Zones and Locations (★) of Trials

All hybrids were randomized and compared in the same field using the same procedure. Table 22 presents an index of all hybrids entered in the 1970 trials.

Single-cross hybrids are indicated with (2X), three-way hybrids with (3X) and special cross hybrids with (Sp) following the hybrid name and number in the tables. All others are double-cross hybrids.

Michigan experimental hybrids are not listed since seed is not yet available for farm use.

METHODS

Scientific procedures are followed in conducting these trials to give all hybrids equal opportunity to demonstrate their capabilities. The best way to compare a group of corn hybrids is to grow them in the same field with the same fertilizer, population, date of planting, etc., for all hybrids.

Seed for Voluntary and Extension entries was submitted by seed companies. An equal number of seeds were counted for each plot of all hybrids. Each hybrid was replicated several times in the field. Plots were planted with a standard two-row or four-row corn planter adapted for small plots.

From seed packaging through harvest and data processing, each hybrid was identified only by a code number to reduce the chance of personal bias by anyone working in the field or with the data. The code was deciphered after the data had been processed.

Stands and lodging were counted before harvest. Plots for grain yields were harvested with a one-row picker-sheller. Field data were processed with high-speed electronic computers.

Silage yields were taken on all hybrids in the Ingham, Huron, Alpena and Alger County trials (Tables 10, 15, 20, 21).

High-lysine opaque-2 hybrids were tested in comparison with some normal dent hybrids in Ingham County (Table 11).

Blight ratings were made at most locations in late August and early September. These are discussed in a later section of this bulletin.

All hybrids in the Monroe, Ingham and Saginaw County trials were compared at two plant populations (Tables 1, 8, 13). Yields from 36-, 30- and 18-inch row spacings for the Ingham County trial are given in Table 9.

Irrigated and non-irrigated comparisons were made in the Montcalm County trials (Table 16).

There were two locations in Cass County — upland soil with irrigation (Table 5) and muck soil (Table 6).

Planting of all trials was completed between April 28 and May 22.

Normal rainfall in most areas of the state during the spring favored timely planting. The Michigan Crop Reporting Service estimated that about two-thirds of the corn acreage was planted by May 20 and 85% by the end of May — the earliest since 1963.

Rainfall during June and July was above normal at most locations and light during August. Leaf blights (Southern, Yellow and Northern) developed in most areas with heavier infections in southern Michigan. Infections developed too late to cause serious damage in most fields. Stalk lodging was above normal.

Corn matured earlier than usual due to earlier planting and a favorable growing season. Leaf kill by blights gave an appearance of earlier maturity. Most corn was matured before the first general killing frost on Oct. 16 and 17. Harvest proceeded rapidly with 60% harvested by the end of October compared to only 30% harvested by Oct. 31, 1969. Rains and wet fields slowed harvest in November.

Dry weather damaged the Grand Traverse County trial and it was abandoned. Table 18 presents 1969, 1968 and 1967 data with no results from 1970.

Yields at the 14 testing locations averaged 3.2 bushels less than in 1969 — 109.5 vs. 112.7. Higher yields were obtained at Monroe, Saginaw, Sanilac and Huron County trials in 1970 with lower yields at the other locations compared to 1969.

The Michigan Crop Reporting Service estimates the 1970 state average corn yield at 80 bushels per acre (highest on record; previous high was 76 bushels in 1968); 1,393,000 acres were harvested for grain. This compares with 74 bushels per acre on 1,266,000 acres in 1969 and 1968 averages of 76 bushels per acre on 1,266,000 acres. In addition, about 450,000 acres of corn are harvested for silage.

HOW TO USE THIS BULLETIN

One-, two- and three-year averages are presented for all hybrids tested during 1970, 1969 and 1968. One-year data are less reliable than two- or three-year averages and should be interpreted with more caution. Confidence in corn performance data increases with the number of years and locations of testing. Two or more years' results are more desirable than one year of testing.

The tables tell you three things about the hybrids tested:

1. average moisture content at harvest,
2. average yield in bushels of shelled corn at 15.5% moisture or silage yields, and
3. average percentage of stalk lodging (plants broken below the ear at harvest).

Hybrids are recorded in the tables in order of their approximate maturity (early to late) based on moisture content at harvest. Moisture content was determined from shelled grain samples at all locations harvested for grain and from ear corn samples in the silage trials.

Stalk breakage is caused by corn borers and/or stalk rot diseases.

Two or more plots of the same hybrid in the same field may produce somewhat different results due to

uncontrolled variability in the soil and other environmental factors. Replication and randomization of the entries are two methods used to reduce these errors. Since these methods do not eliminate all of these effects, differences necessary for statistical significance have been calculated for yield and moisture content.

When comparing any two hybrids, the difference between them should not be considered significant unless it exceeds the value listed as "least significant difference", at the bottom of the tables.

Agronomic information for each trial is given at the bottom of the table. Fertilizer amounts are total pounds per acre of nitrogen, P_2O_5 and K_2O applied during the season.

HOW TO CHOOSE A HYBRID

Adaptation — The map on the cover shows the location of the trials and divides Michigan into four maturity zones. A map can show maturity zones only in a general way. Local variations in weather, soil type and fertility, time of planting, and other conditions all affect adaptation. Corn hybrids are often adapted to more than one zone.

Find the zone in which you plan to grow the corn, and refer to the table which gives results for the trial conducted nearest your farm. Also, refer to the other tables listed in your zone. A hybrid which has done well at two or more locations is more likely to be a good hybrid for your farm, too.

Planting Rate — A population of 12,000 plants per acre is best for corn soils producing 50 bushels or less per acre. Populations of 16,000 to 18,000 are best for soils producing more than 50 bushels per acre. Higher populations (20,000 or more) should be considered only for soils consistently producing more than 100 bushels per acre. Rainfall deficiencies with high plant populations usually result in no increase and frequently a decrease in yield compared to 16,000 to 18,000. Lodging and harvest losses are often greater at high populations.

Maturity — Hybrids are listed in the tables in order of maturity — early to late — based on moisture content of the grain at harvest. This is usually a reasonably accurate measure of relative maturity in most years in Michigan. Early maturing hybrids will be generally lower in moisture content than later maturing hybrids. Differences among hybrids in rate of drying in the field also affects moisture content at harvest but usually does not greatly disturb the relative maturity ratings as determined by moisture content.

Due to blight and unusually rapid drying in the field in 1970, moisture contents do not appear to be as good a measure of relative maturity as usual. Early and medium-early hybrids appear to have dried down to a low moisture and remained there while

later maturing hybrids dried down to moistures approaching those of the early hybrids. Thus, the spread in moisture content between early and late maturing hybrids was less and there appears to be more-than-usual interactions with rate of drying.

One percent more moisture at harvest means a delay in maturity of about two days. Corn is mature when moisture is down to about 32% in the grain or 38% in the ear.

For Grain — It is better to choose an early corn (below average moisture content) than a late corn for grain. The tables show that good yields do not depend on later maturity. Advantages of early-maturing hybrids are:

1. They usually mature before killing frosts.
2. Good-yielding early hybrids generally yield as much or more corn than late hybrids in most areas in Michigan.
3. Lower moisture content at harvest permits safer storage. You will take more clean, sound, high-quality corn out of the crib.
4. Mature, dry corn makes better livestock feed.
5. You can harvest earlier in the fall when weather conditions are most favorable. Early harvest may reduce corn losses resulting from broken stalks and dropped ears in the field.
6. Early hybrids with lower moisture content at harvest reduce drying costs and market discounts for moisture.
7. Fall plowing of corn stubble may be possible with early hybrids on land not subject to erosion.

For Silage — The best silage contains a high percentage of grain. Hybrids that produce high yields of grain should be used for silage. High dry-weight production per acre is a better basis for choosing hybrids for silage than tons of green weight.

Corn for silage should reach the early dent stage well before frost in an average year. The early dent stage, when most of the kernels have dented, is the best time to begin harvest for silage. Dry matter production continues to increase until maturity.

Other Considerations — Choose early hybrids for late plantings, low soil fertility, sandy soils, muck soils and for corn which is to be followed by a winter grain or cover crop.

You can get some degree of "crop insurance" by choosing two or three hybrids which differ slightly in their maturity. If one hybrid runs into unfavorable weather at a critical stage of growth, another may be affected less and come through with a good crop.

Even though you have been growing a hybrid which has given good results, you may be able to improve your corn crop by trying one or more of the hybrids with better records in these trials. Well-tested, new hybrids are worth trying. You may want to try a new hybrid in a strip in the same field with your present hybrid.

BLIGHT RATINGS

Blight ratings were made for all hybrids at most locations in late August and early September, 1970. A rating scale of 1 to 6 (1 = no blight and 6 = heavy blight) was assigned to each plot and averaged for all replications of each hybrid. Ratings of 1-2 can be considered relatively resistant, 3-4 = moderately resistant, and 5-6 = susceptible. Small differences, less than 1.0, between hybrid ratings should not be considered significant.

It was impossible to distinguish between lesions caused by the new "T" race of Southern Corn Leaf Blight (SCLB) and Yellow Leaf Blight (YLB) in the field. Both were present in Michigan in 1970. Northern Corn Leaf Blight was also present at all locations and an attempt was made not to include it in the blight rating.

Most hybrids were susceptible to blight. The majority were hybrids with sterile cytoplasm which is generally susceptible to the new "T" race of SCLB and also tends to be more susceptible than normal cytoplasm to YLB. Some hybrids were a blend of normal and sterile cytoplasm. Blended hybrids did not show a marked difference in blight resistance at the time these ratings were made. Hybrids with normal cytoplasm were more resistant than sterile or blended hybrids but none of them were completely free of blight infection.

Seed for 1971 planting of some of these hybrids may be in a different cytoplasm from that used in 1970 so that the blight ratings presented here represent only 1970 conditions. For 1971, most seed corn bags will have a special tag labeled either "N" (normal cytoplasm), "B" (blend of normal and sterile cytoplasm) or "T" (sterile cytoplasm). "N" seed will probably be more resistant to the "T" race of SCLB than either "B" or "T" seed. Fields planted with "B" seed will probably have $\frac{1}{3}$ - $\frac{1}{2}$ of the plants with some resistance and the other $\frac{2}{3}$ - $\frac{1}{2}$ of the plants

will be more susceptible. "T" seed will probably be more susceptible than either "B" or "N" types. The differences in blight resistance due to seed type are less clear cut for YLB than for the "T" race of SCLB.

USDA estimates of seed for 1971 indicate that about 22% of the total seed supply will be "N", 38% will be "B" and 40% "T". Most of the "N" and "B" seed will be used in other states where blight was more of a problem in 1970 so that Michigan will need to use relatively more "T" seed. There should be adequate supplies of "N" seed of most hybrids for 1972 planting.

Yields of hybrids in these trials did not appear to be related to their blight ratings. Some hybrids with susceptible ratings, 5 and 6, had as good or better yields than hybrids with more blight resistance. The best yielding hybrids were not necessarily the most blight resistant.

Assuming that blight will be no worse or less of a problem in 1971 in Michigan and considering the shortage of "N" and "B" seed, the following suggestions are prescribed for consideration in choosing corn hybrids for 1971:

1. Continue to choose hybrids on the basis of their current performance — high yield, proper maturity and lodging resistance.
2. Do not switch to hybrids with unknown performance or with later maturity just to obtain "N" or "B" seed. Losses due to poor performance and immature corn may exceed any advantage of blight resistance.
3. Do not plant F_2 (second generation) seed saved from "N" cytoplasm commercial fields in 1970. F_2 seed of single-cross hybrids will average 30% or more lower yield than F_1 seed and 15% or more lower yield for three-way and double-cross hybrids. The expected loss in yield from planting F_2 seed will probably be greater than the loss from blight.

Table A. Average, highest, and lowest moisture content, yield, and stalk lodging at 14 locations in 1970.

Location	No. of Hybrids	% Moisture			Bushels Per Acre			% Stalk Lodging		
		Ave.	Highest	Lowest	Ave.	Highest	Lowest	Ave.	Highest	Lowest
Monroe — 19,800	72	19.3	17.8	21.5	138.0	165.3	90.4	11.3	29.2	2.3
Monroe — 26,000					147.0	167.3	98.8	15.2	29.7	1.7
Hillsdale	70	22.2	24.5	18.2	116.5	140.8	94.1	2.4	7.9	0.0
Branch	73	20.2	22.8	16.4	109.8	145.4	75.3	6.9	22.4	0.0
Kalamazoo	44	22.9	26.1	19.2	118.4	144.2	86.5	5.0	16.9	0.0
Cass — Upland Irrigated	63	19.0	22.2	16.4	105.1	132.1	74.9	16.2	40.5	3.7
Cass — Muck Soil	62	20.6	23.4	17.2	93.1	136.5	61.1	25.1	47.2	9.4
Ottawa	48	22.1	25.5	18.0	83.2	107.8	59.8	23.8	46.1	9.0
Ingham — 20,000	70	26.1	29.6	21.0	107.8	132.8	75.0	3.4	18.6	0.0
Ingham — 25,000					104.2	129.7	78.4	10.8	19.5	0.0
Sanilac	51	24.2	27.3	21.2	116.5	151.9	80.1	6.4	21.0	0.6
Saginaw — 20,000	66	22.2	26.0	19.2	124.6	165.1	78.5	9.4	31.7	1.6
Saginaw — 25,400					127.7	171.2	77.8	11.5	41.8	1.8
Huron	53	23.4	28.9	19.1	102.8	132.1	64.2	5.3	18.6	0.0
Montcalm — Irrigated	52	23.9	28.0	18.6	138.1	177.1	94.9	6.3	18.3	0.8
Montcalm — Not Irrigated					101.2	127.7	69.6	7.9	24.4	0.8
Mason	44	22.2	26.6	18.9	93.5	116.7	74.8	5.2	11.1	1.2
Alpena	30	33.2	42.3	25.8	99.6	124.9	73.8	12.2	17.4	5.7
Average		23.0	26.5	19.3	109.5	139.3	76.9	10.5	25.4	2.4

Table 1. SOUTHERN MICHIGAN (Zone 1) MONROE COUNTY TRIAL
One, Two, and Three Year Averages — 1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre						Stalk Lodging %						Blight Rating
	2		3	1970		2 Years		3 Years		1970		2 Years		3 Years		
	1970	Yrs.	Yrs.	19,800	26,000	19,700	25,800	19,500	25,800	19,800	26,000	19,700	25,800	19,500	25,800	
Bayless SX2100 (2X)	17.8	—	—	90.4	98.8	—	—	—	—	23.3	16.9	—	—	—	—	6.0
Michigan 280	18.0	19	20	126.2	129.2	113	114	109	106	6.8	6.5	15	10	10	8	6.0
Michigan 275-2X (2X)	18.1	19	—	115.7	121.5	111	116	—	—	13.0	9.4	11	14	—	—	6.0
Michigan 380-3X (3X)	18.3	—	—	123.4	128.6	—	—	—	—	16.6	14.0	—	—	—	—	5.8
Bayless SX434 (2X)	18.3	22	23	139.5	146.0	139	136	135	122	21.5	25.9	16	21	12	15	5.0
Bo-Jac X13 (3X)	18.3	—	—	122.4	131.0	—	—	—	—	12.8	14.1	—	—	—	—	6.0
1-2Michigan Exp. 67-780 (3X)	18.4	—	—	160.5	166.4	—	—	—	—	4.8	1.7	—	—	—	—	3.7
Blaney B401 (2X)	18.4	20	21	129.0	122.9	117	112	107	102	4.8	4.1	11	7	8	5	6.0
Garno S92 (2X)	18.4	21	—	135.5	140.6	127	124	—	—	6.4	5.1	7	7	—	—	6.0
Super Crost S29 (2X)	18.5	—	—	144.9	147.7	—	—	—	—	4.7	6.4	—	—	—	—	5.8
Migro M-12SX (2X)	18.5	21	—	142.1	140.0	130	120	—	—	12.3	12.3	8	12	—	—	6.0
Blaney 6616 (3X)	18.6	—	—	126.9	138.0	—	—	—	—	8.5	8.2	—	—	—	—	6.0
Super Crost 223 (3X)	18.6	—	—	122.3	128.3	—	—	—	—	8.7	5.7	—	—	—	—	6.0
Wolverine W170 (2X)	18.6	—	—	130.3	139.1	—	—	—	—	9.2	11.2	—	—	—	—	5.3
Michigan 400	18.7	20	21	126.9	128.0	123	121	113	108	15.9	15.4	10	13	8	9	6.0
1Northrup King PX545 (3X)	18.7	21	—	151.3	151.5	133	139	—	—	6.2	5.8	5	6	—	—	5.8
Blaney 6905A (2X)	18.7	21	—	145.9	156.3	134	135	—	—	13.2	15.2	10	10	—	—	6.0
Gutwein 21 (2X)	18.7	—	—	124.0	137.2	—	—	—	—	4.5	3.6	—	—	—	—	5.7
Garno S96 (2X)	18.7	—	—	142.9	151.2	—	—	—	—	16.7	15.2	—	—	—	—	5.7
Pioneer 3715 (3X)	18.8	22	23	106.1	116.2	110	111	107	101	19.1	14.7	12	10	9	8	6.0
1-2Northrup King PX556 (3X)	18.8	22	23	154.0	161.4	136	142	135	128	10.2	17.6	8	15	7	11	5.5
Weather Master EP55 (3X)	18.9	—	—	145.0	149.6	—	—	—	—	19.3	18.2	—	—	—	—	5.7
Blaney B601 (2X)	18.9	23	24	145.0	150.5	133	138	131	127	10.1	12.3	7	9	6	7	5.8
Northrup King (PX519 (Sp.))	18.9	22	23	135.0	145.3	127	128	120	113	2.3	4.1	3	10	4	7	5.8
2Gutwein 20 (2X)	18.9	—	—	147.3	162.9	—	—	—	—	3.1	3.0	—	—	—	—	6.0
Michigan 463-3X (3X)	18.9	20	22	129.2	130.7	124	124	114	110	17.8	16.1	15	13	13	10	6.0
Michigan 402-2X (2X)	18.9	21	21	130.9	140.6	127	133	116	118	16.4	20.9	17	18	13	14	6.0
1-2Pride R450 (2X)	18.9	22	—	155.9	165.8	141	150	—	—	8.7	9.6	7	9	—	—	5.8
Super Crost 233 (3X)	19.0	22	23	139.2	151.8	119	133	113	117	15.0	13.5	10	13	7	10	5.7
Pioneer 3773 (2X)	19.0	21	23	149.4	156.2	136	142	128	122	8.6	11.8	7	10	6	7	5.4
1-2Weather Master EPX5P (2X)	19.0	21	23	158.4	161.9	139	143	124	127	3.1	2.8	15	15	11	10	5.8
1Bayless 3X485 (3X)	19.0	—	—	157.1	158.6	—	—	—	—	22.7	17.0	—	—	—	—	5.5
Northrup King PX525 (Sp.)	19.1	22	23	148.4	156.5	138	133	127	122	17.8	21.4	13	16	11	12	5.7
OYO 145 (3X)	19.1	—	—	101.7	119.5	—	—	—	—	29.2	29.7	—	—	—	—	5.8
Pioneer 3775 (2X)	19.1	20	22	120.4	132.9	123	132	115	118	20.7	24.7	16	22	11	16	6.0
1Trojan TXS105 (2X)	19.1	—	—	157.4	134.5	—	—	—	—	6.3	16.4	—	—	—	—	5.3
Blaney B-AA (2X)	19.2	—	—	146.4	152.7	—	—	—	—	11.7	14.6	—	—	—	—	6.0
Trojan TXS107 (2X)	19.2	—	—	129.0	135.8	—	—	—	—	5.4	4.1	—	—	—	—	5.5
Blaney BA880 (3X)	19.2	—	—	142.8	151.5	—	—	—	—	12.5	9.4	—	—	—	—	5.8
Pioneer 354A	19.2	22	24	141.7	158.8	121	131	114	116	9.4	8.2	8	7	7	6	5.8
Michigan 555-3X (3X)	19.2	22	24	150.4	148.5	143	145	139	135	15.0	18.6	14	15	11	11	6.0
Acco TGG440	19.3	22	—	123.9	112.3	122	116	—	—	19.5	19.6	13	14	—	—	6.0
2Renk RK44 (2X)	19.3	—	—	149.9	161.3	—	—	—	—	3.8	1.7	—	—	—	—	6.0
1Migro M-1010SX (2X)	19.3	22	—	151.7	157.2	132	134	—	—	4.6	4.5	7	7	—	—	5.8
Northrup King PX610 (3X)	19.4	23	25	142.2	161.5	136	149	126	132	7.8	5.2	7	5	6	5	5.7
Michigan 568-3X (3X)	19.4	22	24	148.4	157.8	137	143	130	129	8.3	5.1	6	6	4	5	4.8
Bayless SX433-8Q (2X)	19.4	—	—	147.2	163.2	—	—	—	—	7.9	1.7	—	—	—	—	6.0
1Acco UC3300 (2X)	19.4	—	—	153.6	158.0	—	—	—	—	11.5	14.7	—	—	—	—	5.8
1-2Trojan TXS102 (2X)	19.5	—	—	161.1	167.3	—	—	—	—	7.1	8.4	—	—	—	—	5.0
P.A.G. SX9 (2X)	19.5	23	25	130.9	138.1	114	124	107	113	28.9	22.7	15	14	10	11	5.7
Michigan 500-2X (2X)	19.5	22	23	143.8	149.0	135	146	130	132	12.0	11.7	9	8	6	6	5.7
Northrup King PX50 (2X)	19.6	23	25	146.5	154.4	137	138	125	121	8.5	10.9	6	7	5	5	5.8
Super Crost S27 (2X)	19.6	22	23	143.9	150.3	142	142	135	134	16.5	13.0	18	10	13	8	6.0
Migro M540	19.6	24	—	147.4	157.8	136	141	—	—	20.7	17.4	10	12	—	—	4.8
1Bo-Jac X2E (2X)	19.6	—	—	160.7	157.1	—	—	—	—	4.6	5.8	—	—	—	—	6.0
Northrup King PX580 (3X)	19.6	—	—	141.5	136.4	—	—	—	—	19.7	18.4	—	—	—	—	6.0
1-2Funk Bros. G4444 (2X)	19.7	22	—	156.9	165.3	147	147	—	—	5.6	6.5	11	11	—	—	3.7
Blaney 6606A (2X)	19.7	22	23	143.5	153.9	132	140	123	127	16.2	12.9	10	13	8	9	6.0
Wolverine 176 (2X)	19.7	—	—	145.1	151.2	—	—	—	—	16.1	13.5	—	—	—	—	6.0
Funk Bros G5207	19.8	22	—	119.2	126.1	108	117	—	—	12.7	15.3	16	10	—	—	6.0
Wolverine 175 (2X)	19.9	—	—	115.1	132.0	—	—	—	—	12.4	12.4	—	—	—	—	6.0
Weather Master EPX6A (2X)	20.0	—	—	113.6	124.8	—	—	—	—	20.6	18.1	—	—	—	—	6.0
OYO 210 (2X)	20.1	23	—	146.7	160.1	128	145	—	—	9.5	12.9	6	9	—	—	5.3
Acco UC4400 (2X)	20.2	24	—	127.6	125.3	117	116	—	—	10.3	10.8	13	15	—	—	6.0
1-2Pioneer 3570 (2X)	20.2	23	24	156.4	166.5	147	159	134	142	7.0	6.2	5	6	4	6	4.5
DeKalb XL45 (2X)	20.3	23	25	142.4	150.2	130	137	125	126	20.7	18.5	16	14	11	10	5.8
Acco UC3600 (2X)	20.4	24	—	148.1	148.7	134	132	—	—	4.1	1.7	4	3	—	—	5.7
DeKalb XL346 (3X)	20.7	—	—	124.5	145.8	—	—	—	—	8.1	10.3	—	—	—	—	5.4
1Funk Bros. G4384 (2X)	20.8	23	—	165.4	147.6	150	148	—	—	7.1	5.8	13	9	—	—	2.8
Migro M-22ASX (2X)	20.9	24	—	127.0	144.0	121	127	—	—	10.2	4.0	8	7	—	—	6.0
1Pioneer 3571 (Sp.)	21.4	—	—	157.7	157.8	—	—	—	—	4.6	2.3	—	—	—	—	4.4
OYO 333 (3X)	21.5	24	26	145.9	149.1	138	149	130	130	10.1	11.2	13	13	9	10	5.0
Average	19.4	22	23	138.0	147.0	129	136	124	122	11.3	15.2	10	11	9	9	5.6
Range	17.8	19	20	90.4	98.8	108	111	107	101	2.3	1.7	3	3	4	5	2.8
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to
	21.5	25	26	165.3	167.3	161	162	146	149	29.2	29.7	18	22	13	16	6.0
Least significant difference	0.9	0.7	0.6	13.4	13.8	6	6	5	4							

1Significantly better than average yield at 19,800 population in 1970.

2Significantly better than average yield at 26,000 population in 1970.

1970
Planted May 7
Harvested Nov. 4
Soil type Brookston clay loam
Previous crop Tomatoes
Population 19,800 and 26,000
Rows 30"
Fertilizer 123-132-132
Soil test: pH 6.8
P 33 (medium)
K 165 (medium)

1969
Planted May 26
Harvested Nov. 4
Soil type Brookston loam
Previous crop Corn
Population 19,500 and 25,600
Rows 30"
Fertilizer 193-102-156
Soil test: pH 6.9
P 39 (high)
K 274 (high)

1968
Planted May 8
Harvested Oct. 15
Soil type Brookston clay loam
Previous crop Corn
Population 19,100 and 25,800
Rows 30"
Fertilizer 112-128-182
Soil test: pH 6.5
P 99 (very high)
K 242 (high)

Farm Cooperator: 1970 = Harley Lievens, Riga; 1969 and 1968 = Earl Creech, Dundee

County Extension Director: Paul Nevel, Monroe

Table 2. SOUTHERN MICHIGAN (Zone 1) HILLSDALE COUNTY TRIAL

One, Two, and Three Year Averages — 1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	1970	2	3	1970	2	3	1970	2	3	
	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	
Michigan 380 (3X)	18.2	—	—	105.0	—	—	6.7	—	—	6.0
Michigan 275-2X (2X)	18.9	20	—	107.2	114	—	7.2	9	—	6.0
Michigan 280	18.9	20	20	116.3	118	113	6.0	7	6	6.0
Michigan 400	20.1	22	21	123.7	131	127	3.5	2	1	6.0
Pioneer 3658	20.4	23	22	109.9	120	129	1.8	6	6	6.0
*Mich. Exp. 67-780 (3X)	20.7	—	—	132.2	—	—	1.3	—	—	4.0
Michigan 402-2X (2X)	20.7	22	22	114.4	126	126	7.9	6	5	6.0
Todd M25 (2X)	20.8	—	—	94.1	—	—	3.8	—	—	6.0
Blaney B401 (2X)	20.9	23	—	102.9	106	—	1.7	2	—	6.0
Wyckoff W9X	21.3	24	24	107.3	127	129	0.0	1	1	6.0
Migro M-12 Sx (2X)	21.4	24	23	114.4	120	124	3.0	3	4	6.0
Northrup King PX545 (3X)	21.6	24	—	115.3	128	—	0.0	0	—	6.0
*Blaney 6616 (3X)	21.6	—	—	130.9	—	—	0.6	—	—	6.0
Michigan 555-3X (3X)	21.6	24	24	127.7	145	147	6.4	5	5	6.0
Blaney 6905A (2X)	21.7	24	—	118.0	129	—	4.8	4	—	6.0
Pride R407 (2X)	21.7	—	—	118.2	—	—	0.0	—	—	5.3
Bo-Jac X2E (2X)	21.7	—	—	128.1	—	—	1.2	—	—	6.0
Blaney B-AA (2X)	21.8	24	—	103.1	127	—	0.6	2	—	6.0
Super Crost S27 (2X)	21.8	—	—	123.2	—	—	1.2	—	—	6.0
Todd M30 (2X)	21.8	24	—	110.8	127	—	2.4	2	—	6.0
Northrup King PX519 (Sp.)	21.9	24	24	103.4	122	129	1.7	2	3	6.0
DeKalb XL24 (2X)	21.9	—	—	114.5	—	—	1.2	—	—	5.8
Gutwein 20 (2X)	21.9	25	24	112.8	134	136	0.0	2	4	6.0
Wolverine W176 (2X)	22.0	24	—	118.8	133	—	2.3	2	—	6.0
*Bayless SX434 (2X)	22.0	25	—	130.9	141	—	3.0	3	—	6.0
Wyckoff W3X15 (3X)	22.0	—	—	102.3	—	—	4.0	—	—	6.0
Blaney B601 (2X)	22.1	25	—	120.6	137	—	0.6	1	—	6.0
Northrup King PX525 (Sp.)	22.1	25	24	113.0	120	128	7.9	9	7	5.8
Bayless SX433-8Q (2X)	22.1	—	—	121.3	—	—	2.9	—	—	6.0
*Hulthig X770 (2X)	22.2	—	—	134.0	—	—	2.4	—	—	5.8
OYO 145 (3X)	22.2	—	—	107.8	—	—	1.8	—	—	6.0
Gutwein 21 (2X)	22.2	—	—	113.8	—	—	0.0	—	—	6.0
Michigan 500-2X (2X)	22.3	25	24	125.0	143	147	0.7	2	1	6.0
Super Crost 233 (3X)	22.3	—	—	97.9	—	—	0.0	—	—	6.0
*Funk Bros. G4444 (2X)	22.3	25	—	129.8	143	—	1.2	5	—	3.3
Northrup King PX50 (2X)	22.3	25	25	121.5	142	144	3.0	2	3	6.0
Michigan 463-3X (3X)	22.3	24	23	102.6	122	122	7.0	5	5	6.0
Hulthig X537 (2X)	22.4	—	—	113.3	—	—	1.2	—	—	6.0
*Pride R450 (2X)	22.4	25	24	134.6	145	147	3.6	4	4	6.0
Pioneer 3773 (2X)	22.4	25	24	127.6	139	139	0.6	2	1	6.0
Acco US3300 (2X)	22.4	—	—	118.5	—	—	1.2	—	—	6.0
Trojan TXS102 (2X)	22.4	—	—	123.2	—	—	1.2	—	—	4.5
*Michigan 568-3X (3X)	22.4	25	24	131.7	144	145	2.6	3	3	4.0
*OYO 333 (2X)	22.4	26	26	132.4	141	143	3.6	3	3	5.8
Northrup King PX580 (3X)	22.6	—	—	110.0	—	—	0.6	—	—	6.0

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	1970	2	3	1970	2	3	1970	2	3	
	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	
Todd M55 (2X)	22.6	25	25	98.6	126	130	1.2	2	2	6.0
Cowbell SX112 (2X)	22.6	—	—	117.4	—	—	0.6	—	—	6.0
Northrup King PX47 (2X)	22.6	25	24	108.2	133	142	1.2	2	2	6.0
Lowe SX2TP (2X)	22.6	25	—	120.1	140	—	4.2	3	—	6.0
Funk Bros. G5207	22.7	25	—	109.6	124	—	3.4	6	—	6.0
Wyckoff W10X	22.7	—	—	110.2	—	—	1.8	—	—	6.0
DeKalb XL325 (3X)	22.8	26	25	111.8	124	121	0.6	2	2	6.0
Northrup King PX556 (3X)	22.8	26	—	110.6	134	—	1.7	2	—	6.0
Migro M-1010 SX (2X)	22.8	25	—	110.3	134	—	2.3	3	—	6.0
Northrup King PX556 (3X)	22.9	25	24	112.6	138	139	1.2	2	2	6.0
Wolverine W175 (2X)	22.9	—	—	99.9	—	—	1.1	—	—	6.0
Wyckoff W2412 (2X)	22.9	25	—	102.2	128	—	2.4	2	—	6.0
DeKalb XL45 (2X)	23.0	26	25	110.2	125	126	0.6	3	2	6.0
*Bayless 3X485 (3X)	23.5	26	25	139.2	143	146	1.8	2	2	6.0
*Northrup King PX610 (3X)	23.2	27	26	130.9	145	146	0.6	1	2	6.0
*Funk Bros. G4384 (2X)	23.5	26	25	140.8	151	146	2.4	3	3	3.3
Pioneer 3571 (Sp.)	23.6	—	—	127.0	—	—	1.2	—	—	5.3
Pioneer 3369	23.6	—	—	126.7	—	—	3.6	—	—	4.5
Lowe XR303	23.6	—	—	112.1	—	—	0.6	—	—	6.0
Migro M22ASX (2X)	23.7	26	25	109.1	134	132	4.2	2	2	6.0
Trojan TXS104 (2X)	24.1	—	—	123.1	—	—	2.4	—	—	6.0
Hulthig X928	24.1	—	—	125.3	—	—	3.5	—	—	5.8
Migro M540	24.2	27	27	124.5	145	147	0.0	2	2	5.8
OYO 210 (2X)	24.3	28	—	111.3	135	—	0.6	2	—	5.5
Bayless SX615-5 (2X)	24.5	26	26	123.3	138	132	2.4	3	5	6.0
Average	22.2	25	24	116.5	134	135	2.4	3	3	5.6
Range	18.2	20	20	94.1	106	113	0.0	0	1	3.3
	to	to	to	to	to	to	to	to	to	
	24.5	28	27	140.8	156	147	7.9	9	7	6.0

Least significant difference 0.7 .5 .5 12.3 6 4

*Significantly better than average yield in 1970.

	1970	1969	1968
Planted	May 12	May 6	May 2
Harvested	Oct. 30	Oct. 16	Oct. 23
Soil Type	Griffin sandy loam	Griffin sandy loam	Griffin sandy loam
Previous crop	Corn	Corn	Wheat seeded to clover
Population	19,500	19,100	19,300
Rows	30"	30"	30"
Fertilizer	189-84-156	185-84-141	143-80-112
Soil test: pH	5.9	6.6	
P	70 (high)	26 (medium)	28 (medium)
K	139 (medium)	94 (medium)	86 (medium)

Farm Cooperator: Dean Shamplo, Pittsford

County Extension Agents: E. A. Netherton and A. T. Hall, Hillsdale

Table 3 SOUTHERN MICHIGAN (Zone 1) BRANCH COUNTY TRIAL

One, Two, and Three Year Averages — 1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	1970	2	3	1970	2	3	1970	2	3	
P.A.G. SX48 (2X)	16.4	22	22	96.5	99	96	20.3	16	14	6.0
P.A.G. 45	17.0	23	23	93.2	109	106	16.3	8	8	4.5
Michigan 280	17.1	20	20	94.0	99	106	3.7	4	4	6.0
Michigan 275-2X (2X)	17.2	21	—	86.4	98	—	19.5	14	—	5.0
Michigan 380-3X (3X)	17.5	—	—	92.1	—	—	10.1	—	—	5.8
Acco UC1900 (2X)	18.1	24	—	96.0	108	—	2.3	1	—	5.8
Michigan 400	18.4	23	23	96.9	104	108	7.5	5	5	6.0
Michigan 402-2X (2X)	18.6	23	23	91.4	106	112	19.8	13	9	6.0
*Mich. Exp. 67-780 (3X)	19.1	—	—	136.5	—	—	0.6	—	—	4.0
Wyckoff W1212 (2X)	19.2	—	—	96.1	—	—	5.3	—	—	6.0
Migro M-12 SX (2X)	19.3	24	24	103.9	122	130	10.1	7	5	6.0
Northrup King PX519 (Sp.)	19.3	26	25	102.3	115	124	4.7	2	3	5.5
*Bayless SX434 (2X)	19.4	26	—	130.6	141	—	7.6	5	—	6.0
Pioneer 3715 (3X)	19.4	25	25	83.0	101	116	5.2	3	3	6.0
Cowbell 300-3X (3X)	19.6	25	—	92.2	105	—	0.6	1	—	6.0
DeKalb XL306 (3X)	19.6	25	25	75.3	99	103	22.4	13	9	6.0
Michigan 463-3X (3X)	19.6	24	24	87.5	105	112	8.9	7	7	6.0
P.A.G. 272 (3X)	19.6	27	27	113.4	112	117	2.4	2	2	6.0
P.A.G. SX33 (2X)	19.6	—	—	85.7	—	—	15.6	—	—	6.0
Pride R407 (2X)	19.7	26	—	118.0	137	—	4.7	3	—	5.5
Gutwein 10 (2X)	19.8	26	25	112.1	110	106	5.3	3	5	6.0
Gutwein 17 (3X)	20.0	27	26	114.7	120	127	0.6	0	1	6.0
*Northrup King PX556 (3X)	20.0	26	26	133.1	148	153	2.3	1	2	6.0
Northrup King KE497	20.0	25	25	75.6	90	98	7.1	6	7	6.0
*Bayless SX415 (2X)	20.1	27	26	129.9	130	139	8.6	5	4	6.0
Funk Bros. G5207	20.3	24	24	97.8	109	109	6.4	5	5	6.0
Northrup King PX545 (3X)	20.3	26	—	99.6	123	—	6.4	4	—	6.0
Pride R539 (3X)	20.3	28	—	113.7	141	—	1.2	5	—	6.0
*Hulting X770 (2X)	20.4	—	—	128.2	—	—	4.7	—	—	6.0
Lowe SX2TP (2X)	20.5	26	26	115.7	129	141	4.7	3	3	6.0
Wyckoff W5X	20.5	24	24	111.0	121	119	8.8	6	7	6.0
Wyckoff W10X	20.5	—	—	121.5	—	—	5.4	—	—	6.0
Pride R450 (2X)	20.5	28	27	109.7	130	138	0.0	0	1	5.5
P.A.G. SX7 (2X)	20.5	31	30	112.7	132	141	2.4	2	3	5.3
*Michigan 500-2X (2X)	20.6	26	26	122.3	137	143	5.1	5	5	6.0
Lowe TWX2 (3X)	20.7	26	26	103.0	116	131	2.9	3	2	6.0
Parker 260 (3X)	20.7	—	—	107.2	—	—	5.2	—	—	6.0
Michigan 555-3X (3X)	20.7	26	25	109.4	130	143	10.1	7	7	6.0
Acco TGG440	20.8	27	26	94.6	110	123	10.3	6	5	6.0
*Renk RK44 (2X)	20.8	—	—	130.1	—	—	2.9	—	—	6.0
Bayless SX601 (2X)	20.8	29	28	120.0	125	134	16.9	8	7	6.0
*Michigan 568-3X (3X)	20.8	26	26	128.0	139	146	4.3	5	4	4.5
Northrup King PX50 (2X)	20.8	26	26	101.8	134	145	1.2	2	3	6.0
*Pioneer 3466	20.9	27	26	126.3	126	130	11.8	8	7	5.5
*Hulting X9770	20.9	—	—	137.8	—	—	3.0	—	—	6.0
Northrup King PX525 (Sp.)	20.9	25	25	103.3	125	131	5.3	3	3	5.8
*Bayless SX485 (3X)	20.9	27	27	135.4	135	142	9.3	7	6	6.0
Acco UC2600 (2X)	21.0	27	—	88.8	100	—	20.7	11	—	6.0
Acco UC3600 (2X)	21.0	—	—	121.8	—	—	4.1	—	—	6.0
Hulting X537 (2X)	21.1	—	—	104.1	—	—	0.6	—	—	6.0

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	1970	2	3	1970	2	3	1970	2	3	
Cowbell 112SX (2X)	21.1	27	27	98.7	118	127	2.2	2	3	6.0
*Northrup King PX610 (3X)	21.1	27	27	131.1	144	152	6.4	3	3	6.0
Lowe GG2A (Sp.)	21.2	26	25	110.7	105	110	11.4	9	7	6.0
Hulting X928	21.2	29	28	115.1	126	138	15.1	8	6	6.0
Northrup King PX580 (3X)	21.3	—	—	105.8	—	—	1.8	—	—	5.8
*Parker 333 (3X)	21.3	—	—	134.1	—	—	9.7	—	—	5.5
*Migro M-1010SX (2X)	21.4	26	—	125.8	142	—	4.1	4	—	6.0
Pioneer 3773 (2X)	21.4	26	26	118.2	127	130	3.0	4	4	6.0
Pioneer 3414	21.5	27	26	107.3	124	137	12.7	8	6	6.0
Parker 300 (2X)	21.5	—	—	116.5	—	—	0.6	—	—	6.0
Hulting X245	21.6	—	—	83.2	—	—	12.0	—	—	6.0
Acco UC3300 (2X)	21.6	26	—	108.0	133	—	4.6	3	—	5.0
DeKalb XL45 (2X)	21.6	27	27	95.0	113	125	7.0	5	5	6.0
Wyckoff W2412 (2X)	21.7	—	—	91.9	—	—	2.4	—	—	6.0
Gutwein 20 (2X)	21.8	26	26	110.8	130	137	5.1	5	5	6.0
*Migro M-540	21.9	29	28	130.6	149	153	8.9	5	4	5.8
*Funk Bros. G4444 (2X)	22.0	27	—	132.1	134	—	1.8	1	—	3.0
*Pioneer 3571 (Sp.)	22.2	—	—	124.6	—	—	0.6	—	—	5.8
*Funk Bros. G4384 (2X)	22.3	27	26	135.0	138	146	2.3	3	2	2.8
*Pioneer 3369	22.4	—	—	145.4	—	—	5.4	—	—	4.0
*Hulting X9761	22.4	—	—	125.8	—	—	5.3	—	—	5.8
Migro M-22A (2X)	22.5	28	27	95.2	109	118	7.1	4	3	6.0
Funk Bros. G4333 (2X)	22.8	27	27	90.7	123	132	4.7	3	3	6.0
Average	20.2	26	26	109.8	122	127	6.9	4	5	5.7
Range	16.4 to 22.8	20 to 31	20 to 30	75.3 to 145.4	90 to 150	96 to 153	0.0 to 22.4	0 to 16	1 to 14	2.8 to 6.0
Least significant difference	0.8	0.6	0.5	12.6	6	4				

*Significantly better than average yield in 1970.

	1970	1969	1968
Planted	May 11	May 28	May 3
Harvested	Oct. 28	Oct. 20	Oct. 19
Soil Type	Gilford sandy loam	Gilford sandy loam	Gilford sandy loam
Previous crop	Corn	Corn	Corn
Population	19,300	19,100	19,400
Rows	30"	30"	30"
Fertilizer	137-46-60	152-92-72	116-92-90
Soil test: pH	6.5	6.6	6.8
P	100 (very high)	106 (very high)	79 (very high)
K	344 (very high)	251 (high)	323 (very high)

Farm Cooperator: George Matthews, Union City
County Extension Director: Paul Thompson, Coldwater

**Table 4. SOUTHERN MICHIGAN (Zone 1)
KALAMAZOO COUNTY TRIAL**

One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	1970	2	3	1970	2	3	1970	2	3	
Michigan 275-2X (2X)	19.2	22	—	98.8	103	—	11.5	8	—	6.0
Michigan 280	19.7	22	22	96.0	99	111	5.8	4	2	6.0
Michigan 380-3X (3X)	20.4	—	—	95.4	—	—	6.4	—	—	5.8
DeKalb XL306 (3X)	20.8	26	26	86.5	99	109	14.5	8	5	6.0
Cowell 300 (3X)	21.2	26	—	109.5	101	—	2.3	1	—	6.0
Funk Bros. G4252 (3X)	21.3	24	—	100.8	108	—	1.2	2	—	5.8
Michigan 400	21.3	24	25	112.6	117	119	5.3	3	2	6.0
Michigan 463-3X (3X)	21.3	25	26	114.4	114	125	6.0	3	2	6.0
*Mich. Exp. 67-780 (3X)	21.5	—	—	130.5	—	—	2.7	—	—	4.0
Michigan 402-2X (2X)	21.7	25	26	102.9	116	120	16.9	10	7	6.0
Pioneer 3775 (2X)	21.8	28	28	121.9	123	132	5.3	3	2	6.0
Migro M-12SX (2X)	21.9	27	28	112.9	108	121	5.9	3	2	6.0
Pioneer 371	22.2	27	28	112.1	118	124	4.5	3	2	6.0
Michigan 555-3X (3X)	22.3	27	28	112.5	125	142	9.4	6	4	6.0
Cowbell 307 (3X)	22.3	—	—	104.8	—	—	4.1	—	—	5.8
Northrup King PX556 (3X)	22.5	27	28	118.2	125	139	6.5	4	2	6.0
Northrup King PX519 (Sp.)	22.6	27	29	120.5	124	133	2.9	2	2	6.0
*Bayless SX434 (2X)	22.6	—	—	134.4	—	—	8.0	—	—	6.0
*Bojac X2E (2X)	22.7	—	—	135.6	—	—	4.1	—	—	6.0
Northrup King PX525 (Sp.)	22.7	26	27	115.5	125	134	7.0	5	4	6.0
Michigan 500-2X (2X)	22.8	27	28	125.4	127	137	3.6	2	1	5.5
*Hulting X770 (2X)	23.0	—	—	131.5	—	—	0.0	—	—	5.3
Cowbell 112SX (2X)	23.2	28	28	124.2	123	135	4.6	3	2	5.8
*Pioneer 3773 (2X)	23.2	26	27	134.2	137	143	4.2	2	1	5.3
*Renk RK44 (2X)	23.3	—	—	132.7	—	—	3.0	—	—	6.0
*Prairie Stream SX1B (2X)	23.3	—	—	129.5	—	—	2.9	—	—	6.0
Funk Bros. G5207	23.4	27	27	105.7	109	114	0.6	1	1	6.0
*Michigan 568-3X (3X)	23.4	28	28	130.2	130	138	5.8	3	2	4.3
Northrup King PX610 (3X)	23.6	29	30	105.0	116	127	2.9	2	1	5.8
Pride R407 (2X)	23.6	28	28	122.5	131	139	4.0	2	2	5.8
Northrup King PX50 (2X)	23.7	28	29	111.8	129	138	4.1	3	2	6.0
Hulting X537 (2X)	23.7	—	—	124.3	—	—	7.2	—	—	6.0
Migro M-1010SX (2X)	23.9	27	—	119.8	126	—	4.6	3	—	6.0
*Acco UC3300 (2X)	24.1	—	—	139.0	—	—	4.0	—	—	6.0
P.A.G. SX 52 (2X)	24.2	29	29	105.6	115	120	4.0	2	1	6.0
*Lowe SX2TP (2X)	24.3	—	—	137.4	—	—	4.7	—	—	6.0
*Northrup King PX545 (3X)	24.4	29	—	144.2	143	—	3.4	3	—	6.0
Migro M-540	24.6	31	—	116.1	132	—	3.6	2	—	5.5
*Funk Bros. G4444 (2X)	24.6	28	—	143.1	134	—	4.8	3	—	2.8
Migro M-22ASX (2X)	24.6	29	30	108.2	127	120	5.6	3	2	6.0
DeKalb XL45 (2X)	25.2	30	30	114.0	117	120	3.5	2	2	5.8
Pioneer 3571 (Sp.)	25.5	—	—	121.5	—	—	2.4	—	—	5.5
*Funk Bros. G4333 (2X)	25.8	30	31	133.8	136	136	6.6	3	2	5.8
Acco UC3600 (2X)	26.1	—	—	126.8	—	—	1.7	—	—	5.5
Average	22.9	27	28	118.4	123	128	5.0	3	2	5.5
Range	19.2	22	22	86.5	99	108	0.0	1	1	2.8
	to	to	to	to	to	to	to	to	to	to
	26.1	31	31	144.2	147	143	16.9	10	7	6.0

*Significantly better than average yield in 1970.

	1970	1969	1968
Planted	May 20	May 28	May 9
Harvested	Oct. 23	Oct. 23	Oct. 17
Soil Type	Warsaw loam	Warsaw loam	Warsaw loam
Previous crop	Alfalfa-grass sod	Corn	Corn
Population	19,500	19,800	19,600
Rows	30"	30"	30"
Fertilizer	124-102-108	132-64-122	116-64-122
Soil test: pH	6.8	6.9	7.1
P	19 (low)	47 (high)	59 (very high)
K	106 (low)	236 (high)	291 (high)

Farm Cooperator: Richard Van Vranken, Climax
County Extension Director: Vern Hinz, Kalamazoo

**Table 5. SOUTHERN MICHIGAN (Zone 1)
IRRIGATED UPLAND SOIL — CASS COUNTY TRIAL**

One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	1970	2	3	1970	2	3	1970	2	3	
Michigan 280	16.4	19	20	87.1	98	102	14.6	16	12	6.0
Michigan 275-2X (2X)	16.4	18	—	79.3	97	—	23.6	20	—	6.0
Michigan 380-3X (3X)	16.8	—	—	94.6	—	—	20.4	—	—	5.7
Mich. Exp. 67-780 (3X)	17.3	—	—	116.8	—	—	7.5	—	—	4.0
Northrup King PX556 (3X)	17.8	22	24	110.7	123	131	16.0	11	8	6.0
*Bayless SX434 (2X)	17.9	—	—	129.2	—	—	13.2	—	—	6.0
Pioneer 3956 (2X)	17.9	—	—	94.7	—	—	28.1	—	—	6.0
Todd M55 (2X)	18.1	22	24	98.9	122	128	15.0	12	8	6.0
Todd M25 (2X)	18.1	—	—	75.9	—	—	40.5	—	—	6.0
Bo-Jac X13 (3X)	18.1	—	—	87.2	—	—	22.5	—	—	6.0
Northrup King PX545 (3X)	18.2	22	—	98.7	118	—	11.5	8	—	6.0
Northrup King PX519 (Sp.)	18.2	21	23	109.9	130	132	11.0	8	6	6.0
Super Crost S19 (2X)	18.3	—	—	106.3	—	—	13.9	—	—	6.0
Migro M-12SX (2X)	18.3	21	22	104.6	112	125	22.8	19	13	6.0
Michigan 463-3X (3X)	18.3	21	22	89.7	105	112	24.6	20	15	6.0
Michigan 400	18.4	20	21	97.3	106	115	11.8	13	10	6.0
Pride R407 (2X)	18.4	22	—	108.8	123	—	12.3	8	—	6.0
Michigan 402-2X (2X)	18.5	21	21	92.1	108	111	24.8	21	16	6.0
Northrup King PX50 (2X)	18.6	22	24	99.8	120	131	7.0	6	5	5.3
Blaney 6950A (2X)	18.7	—	—	98.6	—	—	17.7	—	—	6.0
Northrup King PX525 (Sp.)	18.7	21	22	110.7	117	124	26.6	19	13	5.3
Blaney B601 (2X)	18.7	22	23	110.6	122	132	4.8	7	5	6.0
Migro M-110A	18.8	21	23	75.9	96	104	16.3	12	9	6.0
Michigan 555-3X (3X)	18.8	22	24	101.4	119	135	25.2	17	13	6.0
Super Crost S27 (2X)	18.8	—	—	104.1	—	—	5.6	—	—	6.0
Pioneer 3567 (2X)	18.8	—	—	101.8	—	—	12.8	—	—	6.0
Parker 300 (2X)	18.9	—	—	116.1	—	—	11.5	—	—	5.3
Parker 233 (3X)	18.9	—	—	103.7	—	—	27.5	—	—	6.0
*Michigan 568-3X (3X)	18.9	22	24	121.6	127	136	9.8	10	9	4.7
Weather Master EPX4P (2X)	18.9	—	—	75.0	—	—	25.5	—	—	6.0
Weather Master EPX4A (2X)	19.0	—	—	74.9	—	—	40.4	—	—	6.0
*Moews SM220 (2X)	19.0	—	—	122.2	—	—	8.5	—	—	6.0
Northrup King PX47 (2X)	19.0	22	24	109.8	119	130	9.4	7	6	6.0
Michigan 500-2X (2X)	19.0	22	23	112.1	123	133	10.5	10	7	6.0
Bo-Jac X2E (2X)	19.0	—	—	101.6	—	—	6.8	—	—	6.0
*Prairie Stream SX13 (2X)	19.0	—	—	127.2	—	—	9.8	—	—	6.0
Parker 260 (3X)	19.1	—	—	111.0	—	—	18.7	—	—	6.0
Moews SM327 (2X)	19.1	—	—	109.2	—	—	6.3	—	—	6.0
Acco UC3300 (2X)	19.1	—	—	101.3	—	—	7.1	—	—	5.3
Acco US3600 (2X)	19.1	—	—	110.4	—	—	8.1	—	—	6.0
Migro M-1010SX (2X)	19.1	21	—	112.5	121	—	5.6	8	—	6.0
*Pioneer 3773 (2X)	19.2	22	24	121.4	129	137	20.5	15	10	6.0
Parker 333 (3X)	19.2	23	—	112.7	135	—	18.1	12	—	6.0
*Migro M-540	19.2	24	—	123.7	137	—	11.1	8	—	5.7
*Todd M30 (2X)	19.3	22	—	118.7	124	—	8.1	7	—	6.0
*Northrup King PX610 (3X)	19.3	23	25	117.3	132	143	12.0	10	7	6.0
Moews SM229 (2X)	19.3	—	—	108.3	—	—	14.4	—	—	6.0
*Pioneer 3516 (2X)	19.3	—	—	120.6	—	—	28.7	—	—	5.0
Super Crost 233 (3X)	19.4	—	—	96.5	—	—	12.8	—	—	6.0
Blaney B401 (2X)	19.4	21	22	77.1	98	106	21.2	20	14	6.0
Acco U353 (3X)	19.5	—	—	102.4	—	—	16.0	—	—	6.0
Blaney 6616 (3X)	19.5	—	—	95.3	—	—	14.6	—	—	6.0
*Pioneer 3570 (2X)	19.5	24	25	126.4	131	143	3.9	3	3	4.3
Blaney B-AA (2X)	19.8	—	—	106.7	—	—	6.3	—	—	6.0
*Pioneer 3505	19.8	—	—	118.9	—	—	16.3	—	—	6.0
Pioneer 3571 (Sp.)	20.1	—	—	109.7	—	—	14.2	—	—	4.7
Renk RK44 (2X)	20.1	—	—	109.4	—	—	9.4	—	—	6.0
*Funk Bros. G4444 (2X)	20.5	23	—	132.1	146	—	15.3	10	—	4.3
Moews SM337 (3X)	20.5	—	—	112.8	—	—	10.0	—	—	6.0
Acco UC5200 (2X)	20.5	—	—	115.6	—	—	10.7	—	—	6.0
Migro M-22ASX (2X)	20.5	23	25	98.6	104	112	26.1	18	14	6.0
Acco UC4500 (2X)	21.0	—	—	83.0	—	—	20.0	—	—	6.0
Funk Bros. G4384 (2X)	21.2	24	25	114.0	129	141	26.6	16	11	4.3
Average	19.0	22	23	105.1	122	126	16.2	11	10	5.8
Range	16.4	19	20	74.9	96	102	3.7	3	3	4.3
	to	to	to	to	to	to	to	to	to	to
	22.2	25	25	132.1	148	143	40.5	21	16	6.0

*Significantly better than average yield in 1970.

	1970	1969	1968
Planted	May 7	May 13	May 4
Harvested	Oct. 26	Oct. 21	Oct. 15
Soil Type	Kalamazoo sandy loam	Kalamazoo sandy loam	Kalamazoo sandy loam
Previous crop	Corn	Corn	Corn
Population	22,700	25,300	23,800
Rows	28"	28"	28"
Fertilizer	208-54-138	218-54-138	174-42-6
Irrigation	3 inches	5 inches	5 inches
Soil test:	6.6	6.0	6.8
pH	73 (very high)	58 (high)	84 (very high)
P	321 (very high)	97 (low)	272 (high)
K			

Table 6. **SOUTHERN MICHIGAN (Zone 1)**
MUCK SOIL — CASS COUNTY TRIAL

One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	1970	2	3	1970	2	3	1970	2	3	
Michigan 275-2X (2X)	17.2	19	19	85.8	93	93	24.7	18	16	6.0
Michigan 280	17.6	20	20	92.8	93	97	20.1	13	12	6.0
Michigan 300	17.6	20	21	92.9	90	91	21.8	15	11	6.0
Michigan 250	17.9	20	21	86.6	88	85	22.5	16	14	6.0
Michigan 380-3X (3X)	18.2	—	—	86.3	—	—	23.6	—	—	6.0
Weather Master EPX4P (2X)	18.4	—	—	82.5	—	—	28.4	—	—	6.0
Bayless SX210Q (2X)	18.6	—	—	71.4	—	—	33.4	—	—	6.0
Blaney B401 (2X)	19.2	21	22	83.1	101	101	21.9	12	9	6.0
Gutwein 21 (2X)	19.4	—	—	74.2	—	—	28.8	—	—	6.0
*Mich. Exp. 67-780 (3X)	19.4	—	—	106.0	—	—	9.4	—	—	4.5
Michigan 400	19.4	22	23	88.9	102	96	19.2	12	10	6.0
*Northrup King PX47 (2X)	19.4	23	24	111.2	135	131	28.8	17	13	6.0
Northrup King PX519 (Sp.)	19.6	23	24	93.1	111	116	14.8	10	9	5.7
Northrup King PX525 (Sp.)	19.6	23	24	98.4	112	111	27.6	16	11	6.0
Michigan 402-2X (2X)	19.6	22	23	93.8	99	101	29.2	19	13	6.0
Michigan 463-3X (3X)	19.6	23	25	88.9	105	99	21.4	14	13	6.0
Cowbell HK23	19.7	—	—	61.9	—	—	47.2	—	—	6.0
Bayless SX434 (2X)	19.7	24	—	95.5	120	—	27.2	15	—	6.0
Blaney 6950A (2X)	19.7	—	—	96.0	—	—	29.4	—	—	6.0
Pioneer 3956 (2X)	19.8	—	—	86.4	—	—	33.3	—	—	6.0
Weather Master EPX4A (2X)	19.9	—	—	61.1	—	—	41.6	—	—	6.0
*Parker 360 (2X)	20.0	24	—	107.5	131	—	17.1	12	—	6.0
Prairie Stream SX1B	20.0	—	—	96.3	—	—	14.6	—	—	6.0
Parker 260 (3X)	20.0	—	—	95.3	—	—	20.5	—	—	6.0
Migro M-110A	20.1	24	24	74.8	88	87	36.7	19	14	6.0
Gutwein 20 (2X)	20.1	23	25	101.9	115	110	26.9	14	13	6.0
Gutwein 10 (2X)	20.2	23	24	86.1	90	90	21.3	12	9	6.0
DeKalb XL306 (3X)	20.2	—	—	71.8	—	—	42.5	—	—	6.0
Blaney B-AA (2X)	20.5	—	—	99.3	—	—	19.5	—	—	6.0
OYO 145 (3X)	20.5	—	—	74.1	—	—	30.8	—	—	6.0
Michigan 555-3X (3X)	20.5	24	25	96.0	122	122	27.4	17	14	6.0
Migro M-12SX (2X)	20.6	24	25	76.0	95	99	34.8	18	13	6.0
Blaney 6616 (3X)	20.8	—	—	96.5	—	—	32.1	—	—	6.0
Northrup King PX556 (3X)	20.8	24	26	87.8	120	115	30.8	24	13	6.0
Northrup King PX545 (3X)	20.8	24	—	98.6	124	—	28.9	16	—	6.0
Migro M-1010SX (2X)	20.9	24	—	92.9	113	—	14.6	8	—	6.0
*Acco UC3300 (2X)	20.9	—	—	105.6	—	—	22.2	—	—	6.0
*Michigan 568-3X (3X)	20.9	25	26	110.0	124	124	11.0	7	7	5.0
DeKalb XL15A (2X)	21.0	—	—	94.1	—	—	34.0	—	—	4.7
*Michigan 500-2X (2X)	21.1	24	25	112.8	128	130	20.8	13	10	6.0
*Super Crost S27 (2X)	21.1	24	—	107.2	126	—	28.6	18	—	6.0
*Blaney B601 (2X)	21.3	25	25	109.6	124	110	19.3	11	9	6.0
Northrup King PX50 (2X)	21.3	25	26	100.5	128	118	18.3	11	9	6.0
Funk Bros. G4360	21.4	—	—	98.4	—	—	22.8	—	—	5.3
DeKalb XL24 (2X)	21.4	—	—	88.8	—	—	33.9	—	—	6.0
Northrup King PX610 (3X)	21.4	25	26	84.1	100	104	22.0	13	11	6.0
*Pioneer 3773 (2X)	21.5	25	25	116.8	126	130	26.9	15	11	5.7
Pioneer 3571 (Sp.)	21.6	—	—	99.2	—	—	14.6	—	—	5.3
OYO 210 (2X)	21.6	—	—	82.7	—	—	17.6	—	—	6.0
Funk Bros. G4287 (3X)	21.7	—	—	89.2	—	—	25.0	—	—	6.0
OYO 333 (2X)	21.8	—	—	86.0	—	—	34.7	—	—	6.0
*Funk Bros. G4444 (2X)	21.9	24	—	136.5	144	—	21.5	15	—	3.7
*Pioneer 3516 (2X)	22.4	—	—	126.7	—	—	21.1	—	—	4.7
*Pioneer 3561 (2X)	22.5	25	—	119.5	112	—	18.3	12	—	4.3
Funk Bros. G4384 (2X)	22.5	26	26	101.5	129	123	23.5	13	13	3.0
DeKalb XL45 (2X)	23.0	—	—	86.5	—	—	31.2	—	—	6.0
Funk Bros. G5207	23.1	—	—	78.1	—	—	21.5	—	—	5.7
Migro M-540	23.1	27	—	85.8	118	—	19.8	11	—	6.0
Bayless SX615-5 (2X)	23.1	26	26	93.9	123	119	24.2	13	12	6.0
Moews SM337 (3X)	23.3	—	—	97.9	—	—	17.3	—	—	6.0
Migro M-22ASX (2X)	23.4	27	27	76.8	106	103	34.5	19	14	6.0
*DeKalb XL23 (2X)	23.7	—	—	107.6	—	—	18.9	—	—	5.0
Average	20.6	24	24	93.1	115	108	25.1	14	11	5.7
Range	17.2	19	19	61.1	88	85	9.4	7	7	3.0
	to to to	to to to	to to to	to to to	to to to	to to to	to to to	to to to	to to to	
	23.4	27	27	136.5	144	131	47.2	19	14	6.0

Least significant difference 0.8 0.6 0.5 10.3 5 4

*Significantly better than average yield in 1970.

	1970	1969	1968
Planted	May 18	May 16	May 15
Harvested	Oct. 27	Oct. 21	Oct. 15
Soil Type	Carlisle muck	Carlisle muck	Carlisle muck
Previous crop	Corn	Corn	Corn
Rows	30"	30"	30"
Population	19,700	19,900	18,800
Fertilizer	107-69-100	97-62-129	82-92-132 + 1% copper and zinc
Soil test: pH	5.4	5.4	5.6
P	69 (very high)	173 (very high)	101 (very high)
K	570 (very high)	666 (very high)	658 (very high)

Farm Cooperators: Oliver, Russell, and Roger Anderson, Cassopolis
County Extension Director: Fred Sackrider, Cassopolis

Table 7. **SOUTH CENTRAL MICHIGAN (Zone 2)**
OTTAWA COUNTY TRIAL

One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	2	3		2	3		2	3		
	1970 Yrs.	Yrs.		1970 Yrs.	Yrs.		1970 Yrs.	Yrs.		
Pioneer 3956 (2X)	18.0	—	—	59.8	—	—	45.0	—	—	6.0
Northrup King PX20 (2X)	18.3	—	—	76.3	—	—	14.6	—	—	6.0
Michigan 275-2X (2X)	18.5	21	21	84.5	97	108	23.4	17	15	6.0
Cowbell 102SX (2X)	19.0	24	24	81.3	97	109	21.2	16	14	5.5
Michigan 280	19.0	21	21	91.8	95	107	19.1	16	13	6.0
Michigan 380-3X	19.1	—	—	85.5	—	—	24.3	—	—	5.5
Northrup King PX476 (3X)	19.3	22	—	64.8	82	—	33.7	21	—	6.0
Crows 196 (2X)	19.8	—	—	84.6	—	—	32.1	—	—	6.0
Cowbell 300-3X (3X)	19.9	—	—	73.4	—	—	19.6	—	—	6.0
Acco 1900 (2X)	20.7	—	—	75.6	—	—	23.6	—	—	5.8
Michigan 250	20.9	22	22	83.0	87	95	28.6	24	19	6.0
Acco UC2300 (2X)	20.9	—	—	82.3	—	—	25.0	—	—	6.0
*Michigan 300	20.9	23	22	101.4	102	103	19.2	16	13	6.0
Blaney B401 (2X)	21.0	25	—	80.0	95	—	13.9	9	—	6.0
Funk Bros. G4252 (3X)	21.3	24	—	69.4	83	—	35.6	23	—	6.0
Michigan 270	21.4	22	22	68.0	75	81	29.6	24	18	6.0
Michigan 400	21.5	25	25	91.8	99	108	22.7	18	14	5.8
Northrup King PX525 (Sp.)	21.5	26	26	79.0	103	118	34.8	21	16	6.0
*Mich. Exp. 67-780 (3X)	21.5	25	—	107.8	108	—	11.1	6	—	4.3
*Northrup King PX519 (Sp.)	21.5	26	26	94.9	97	111	21.1	16	12	6.0
Pioneer 371	21.6	26	27	67.4	86	103	42.4	30	23	6.0
Funk Bros. G4287 (3X)	21.6	25	25	77.3	81	91	23.5	19	14	6.0
Michigan 402-2X (2X)	21.6	25	25	88.8	98	108	23.6	18	13	6.0
DeKalb XL306 (3X)	21.9	26	26	66.0	77	91	23.0	17	14	6.0
DeKalb XL24 (2X)	22.2	—	—	83.0	—	—	17.0	—	—	5.3
Michigan 463-3X (3X)	22.3	26	26	81.0	96	106	23.6	18	14	6.0
*Crows 226 (2X)	22.4	—	—	103.3	—	—	21.5	—	—	6.0
Michigan 500-2X (2X)	22.4	27	27	92.1	113	126	20.1	15	12	6.0
*Pioneer 3773 (2X)	22.5	27	27	95.7	107	123	42.0	26	19	5.8
Pride R407 (2X)	22.5	27	28	77.8	88	109	9.0	8	6	4.3
*Blaney 6905A (2X)	22.6	28	—	105.1	98	—	17.8	13	—	6.0
DeKalb XL315 (3X)	22.6	27	27	66.8	77	87	29.8	20	15	6.0
Northrup King PX50 (2X)	22.7	—	—	88.4	—	—	12.9	—	—	6.0
DeKalb XL23 (2X)	23.0	—	—	75.4	—	—	17.4	—	—	4.8
DeKalb XL45A (2X)	23.1	—	—	80.1	—	—	25.1	—	—	5.0
Blaney 6616 (3X)	23.2	—	—	79.2	—	—	22.8	—	—	6.0
*Michigan 555-3X (3X)	23.3	27	27	92.6	111	125	18.7	14	12	5.5
*Michigan 568-3X (3X)	23.3	27	27	101.4	114	125	20.7	14	12	4.3
Pride R450 (2X)	23.6	28	28	78.1	92	111	28.5	18	13	5.0
*Crows 251 (2X)	23.6	—	—	94.5	—	—	25.2	—	—	6.0
Funk Bros. G4222 (2X)	23.7	—	—	66.6	—	—	34.1	—	—	6.0
*Acco UC3300 (2X)	23.8	—	—	101.6	—	—	20.2	—	—	6.0
Blaney B601 (2X)	24.1	28	—	86.2	101	—	27.0	18	—	6.0
DeKalb XL325 (3X)	24.2	—	—	87.6	—	—	15.1	—	—	6.0
Pioneer 3715 (3X)	24.2	—	—	69.7	—	—	46.1	—	—	6.0
DeKalb XL45 (2X)	24.3	29	29	77.7	103	113	36.7	23	19	6.0
*Trojan SX102 (2X)	24.4	—	—	96.7	—	—	15.1	—	—	3.5
Crows 216 (2X)	24.5	—	—	102.5	—	—	19.1	—	—	6.0
*Pioneer 3561 (2X)	24.7	—	—	94.0	—	—	12.7	—	—	4.3
Blaney B-AA (2X)	25.0	28	—	84.7	100	—	10.5	9	—	6.0
Funk Bros. G4444 (2X)	25.1	—	—	86.8	—	—	32.5	—	—	4.0
*Pioneer 3579 (2X)	25.5	—	—	102.9	—	—	9.4	—	—	4.8
Average	22.1	26	26	83.2	97	107	23.8	16	15	5.6
Range	18.0 to 25.5	21 to 29	21 to 29	59.8 to 107.8	75 to 120	81 to 126	9.0 to 46.1	4 to 30	6 to 23	3.5 to 6.0
Least significant difference	0.9	0.6	0.5	9.5	5	4				

Table 8. SOUTH CENTRAL MICHIGAN (Zone 2) GRAIN — INGHAM COUNTY TRIAL

One, Two, and Three Year Averages — 1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre						Stalk lodging %						Blight rating
	2		3	1970		2 Years		3 Years		1970		2 Years		3 Years		
	1970	Yrs.	Yrs.	20,000	25,100	19,700	25,000	19,600	25,000	20,000	25,100	19,700	25,000	19,600	25,000	
Michigan 280	21.0	23	24	101.7	106.4	103	114	108	118	3.1	4.3	3	2	3	2	6.0
Michigan 275-2X (2X)	21.4	22	24	94.7	88.9	104	105	111	116	7.7	8.6	5	5	4	6	6.0
Michigan 270	21.8	22	23	80.5	78.4	81	84	87	86	18.6	19.5	11	12	8	12	6.0
Northrup King PX20 (2X)	22.0	—	—	92.4	86.7	—	—	—	—	4.6	4.2	—	—	—	—	6.0
Michigan 250	22.0	23	24	91.8	88.1	96	98	101	100	6.9	6.1	5	4	4	6	6.0
Michigan 300	22.4	23	25	97.0	83.8	99	94	103	100	1.7	4.2	3	2	3	2	6.0
Moews SM220 (2X)	22.8	—	—	106.5	110.8	—	—	—	—	2.3	1.8	—	—	—	—	5.5
Northrup King PX476 (3X)	23.6	25	—	92.2	89.8	99	108	—	—	4.6	2.5	4	2	—	—	5.8
Acco UC1900 (2X)	23.6	—	—	104.6	107.4	—	—	—	—	3.1	5.5	—	—	—	—	5.5
Blaney B401 (2X)	23.6	25	27	98.1	98.4	109	107	111	110	6.2	5.0	4	3	3	2	5.8
Michigan 380-3X (3X)	23.7	—	—	105.7	99.9	—	—	—	—	5.2	8.2	—	—	—	—	5.8
2Acco UC2300 (2X)	24.1	—	—	119.1	118.3	—	—	—	—	0.8	3.0	—	—	—	—	5.8
Michigan 402-2X (2X)	24.1	26	28	111.2	107.8	116	118	117	121	6.4	6.7	5	5	3	4	6.0
DeKalb XL306 (3X)	24.5	26	28	86.1	80.4	92	90	94	96	15.2	9.8	8	6	7	5	6.0
1-2Mich. Exp. 67-780 (3X)	24.7	26	—	121.7	128.7	128	134	—	—	4.7	0.8	2	2	—	—	3.5
Michigan 400	24.8	26	27	108.6	111.5	113	118	109	118	0.8	4.2	1	2	1	2	5.8
Funk Bros. G4287 (3X)	24.8	26	27	103.7	91.7	104	102	104	101	5.3	5.5	5	5	4	5	5.8
Funk Bros. G4240 (2X)	24.9	26	—	97.4	101.5	100	99	—	—	2.3	5.4	2	5	—	—	5.8
Bo-Jac X13 (3X)	25.0	—	—	103.4	101.9	—	—	—	—	1.6	3.8	—	—	—	—	5.8
Funk Bros. G4252 (3X)	25.1	—	—	78.6	85.2	—	—	—	—	5.6	6.8	—	—	—	—	5.3
Michigan 463-3X (3X)	25.1	27	29	101.5	96.0	112	108	112	111	7.6	2.5	4	5	4	4	6.0
Pioneer 3775 (2X)	25.2	28	30	102.9	100.4	114	120	114	117	6.1	7.3	3	4	3	3	5.8
Northrup King PX591 (Sp.)	25.3	28	30	117.6	102.2	110	109	118	120	0.8	6.1	1	3	1	2	5.3
Super Crost S19 (2X)	25.3	27	28	107.7	90.6	115	105	119	111	3.0	4.3	2	4	2	3	5.3
Pioneer 3773 (2X)	25.4	28	29	108.8	107.7	109	108	115	114	2.3	6.8	2	4	1	3	5.8
Cowbell 300-3X (3X)	25.4	26	—	90.5	83.1	104	104	—	—	5.0	4.3	3	3	—	—	6.0
Cargill 566	25.5	—	—	104.8	109.6	—	—	—	—	0.8	8.0	—	—	—	—	5.3
Wolverine W175 (2X)	25.9	29	—	103.9	106.2	117	126	—	—	2.2	3.6	2	2	—	—	6.0
Cowbell 112XS (2X)	25.9	28	30	117.2	106.7	125	117	129	123	1.6	8.1	1	5	1	4	5.5
Migro M-12SX (2X)	25.9	28	30	115.8	113.5	111	107	105	109	4.7	6.6	3	4	2	3	5.3
DeKalb XL24 (2X)	25.9	—	—	96.8	95.3	—	—	—	—	6.5	7.2	—	—	—	—	6.0
Cargill 590	25.9	—	—	75.0	80.9	—	—	—	—	9.1	18.3	—	—	—	—	6.0
DeKalb XL315 (3X)	25.9	27	29	88.8	79.1	95	90	95	102	16.5	12.3	9	7	6	5	6.0
Cargill 666	26.0	—	—	104.1	108.6	—	—	—	—	0.8	1.8	—	—	—	—	4.8
1-2Blaney 6606A (2X)	26.0	28	30	130.0	122.3	133	130	136	135	3.3	8.5	2	6	2	4	6.0
Funk Bros. G4222 (2X)	26.0	28	29	100.8	96.4	109	106	112	111	6.2	7.6	4	4	3	3	6.0
1-2Michigan 500-2X (2X)	26.0	28	30	120.1	123.2	123	133	131	137	5.6	7.0	3	5	2	4	5.5
OYO 360 (3X)	26.1	29	31	108.3	99.5	115	122	114	117	3.9	7.1	3	4	2	3	5.3
DeKalb XL325 (3X)	26.2	28	30	88.6	89.7	97	96	99	106	3.8	5.8	3	3	2	3	6.0
1Blaney B601 (2X)	26.2	28	30	122.2	109.5	130	120	133	128	3.1	3.5	2	2	2	1	5.8
Northrup King PX525 (Sp.)	26.2	28	30	118.0	105.7	131	127	135	130	2.4	9.1	2	5	2	4	5.5
Blaney 6905A (2X)	26.3	28	—	116.5	115.1	114	123	—	—	3.9	0.6	2	1	—	—	5.0
Michigan 555-3X (3X)	26.3	28	30	120.6	114.2	129	130	135	139	0.8	6.8	2	6	2	5	5.8
Cowbell 206SX (2X)	26.3	29	30	117.7	103.7	120	119	125	117	0.8	3.2	0	2	1	2	5.8
Blaney 6616 (3X)	26.5	—	—	102.7	108.8	—	—	—	—	1.6	6.7	—	—	—	—	5.8
Wolverine W170 (2X)	26.5	29	—	107.0	115.9	113	114	—	—	2.3	3.6	1	2	—	—	4.8
Blaney B-AA (2X)	26.6	28	—	109.8	101.6	114	121	—	—	1.6	3.0	1	3	—	—	5.8
Migro M-1010SX (2X)	26.6	28	—	112.2	105.6	118	117	—	—	3.2	1.2	2	1	—	—	5.8
1-2Michigan 568-3X (3X)	26.7	28	30	129.1	123.7	125	130	129	132	0.0	3.0	1	3	1	2	4.3
Moews SM229 (2X)	26.8	—	—	114.4	96.4	—	—	—	—	0.0	1.8	—	—	—	—	5.8
Jacques JX162 (2X)	26.8	—	—	109.0	94.0	—	—	—	—	2.3	6.2	—	—	—	—	5.8
1Trojan SX102 (2X)	27.1	—	—	129.6	112.5	—	—	—	—	0.0	3.1	—	—	—	—	4.8
Cowbell 307-3X (3X)	27.1	—	—	109.8	97.2	—	—	—	—	1.5	2.4	—	—	—	—	5.8
1Bo-Jac X2E (2X)	27.2	—	—	120.0	104.8	—	—	—	—	0.8	1.9	—	—	—	—	4.5
Super Crost 233 (3X)	27.3	30	—	103.1	84.5	113	105	—	—	2.3	6.7	2	3	—	—	5.5
1Funk Bros. G4444 (2X)	27.3	28	—	132.6	115.5	143	133	—	—	3.6	5.5	3	3	—	—	3.0
1-2Pride R407 (2X)	27.4	30	31	126.6	126.3	131	133	126	133	0.8	1.8	1	1	1	1	4.5
1-2Acco UC3300 (2X)	27.5	—	—	132.2	122.2	—	—	—	—	2.4	4.2	—	—	—	—	5.3
Wolverine W176 (2X)	27.5	29	—	115.0	101.5	118	116	—	—	1.5	3.0	1	2	—	—	6.0
2DeKalb XL23 (2X)	27.6	—	—	110.3	117.9	—	—	—	—	1.6	6.2	—	—	—	—	4.5
Super Crost S27 (2X)	27.6	29	30	109.1	90.7	116	113	123	119	0.0	3.7	0	2	0	1	5.5
Northrup King PX50 (2X)	27.8	—	—	103.6	90.5	—	—	—	—	1.5	1.8	—	—	—	—	4.8
DeKalb XL45 (2X)	27.9	30	32	102.9	111.4	109	119	114	123	0.8	4.9	0	2	0	2	6.0
P.A.G. SX52 (2X)	28.0	30	32	91.6	98.2	104	114	110	120	1.6	4.4	2	3	1	2	5.8
1-2Pride R450 (2X)	28.1	30	31	123.1	120.2	126	133	129	133	0.8	2.5	1	2	1	1	5.3
DeKalb XL45A (2X)	28.2	—	—	112.5	107.3	—	—	—	—	2.4	3.0	—	—	—	—	5.0
2OYO 333 (2X)	28.6	—	—	119.2	129.7	—	—	—	—	0.8	5.5	—	—	—	—	5.3
1Pioneer 3579 (2X)	28.7	—	—	122.2	109.9	—	—	—	—	0.0	0.0	—	—	—	—	4.5
1-2Migro M-540	28.9	—	—	132.8	126.7	—	—	—	—	2.3	9.2	—	—	—	—	4.3
1-2Pioneer 3561 (2X)	29.6	—	—	129.5	128.4	—	—	—	—	3.1	1.8	—	—	—	—	3.3
Average	26.1	27	29	107.8	104.2	115	116	115	117	3.4	10.8	3	3	2	2	5.4
Range	21.0	22	23	75.0	78.4	81	84	87	86	0.0	0.0	0	1	0	0	3.0
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to
	29.6	30	32	132.8	129.7	143	148	136	139	18.6	19.5	11	12	8	6	6.0
Least significant difference	0.9	0.7	0.7	11.6	12.1	6	6	5	5							

1Significantly better than average yield at 20,000 population in 1970.

2Significantly better than average yield at 25,100 population in 1970.

1970
 Planted April 28
 Harvested Oct. 2
 Soil type Conover clay loam
 Previous crop Corn
 Population 20,000 and 25,100
 Rows 36"
 Fertilizer 158-85-85*
 Soil test: pH 6.4
 P 95 (very high)
 K 199 (high)

1969
 Planted May 5
 Harvested Oct. 8
 Soil type Conover clay loam
 Previous crop Corn
 Population 19,400 and 24,900
 Rows 36"
 Fertilizer 185-70-70*
 Soil test: pH 7.0
 P 41 (high)
 K 224 (high)

1968
 Planted May 4
 Harvested Oct. 5
 Soil type Conover clay loam
 Previous crop Corn
 Population 19,500 and 25,000
 Rows 36"
 Fertilizer 150-60-60
 Soil test: pH 6.6
 P 59 (high)
 K 315 (high)

Farm Cooperator: Michigan State University, East Lansing

*Acknowledgment: Anhydrous ammonia donated by Klein Fertilizer Co., Fowlerville, Michigan

Table 9. SOUTH CENTRAL MICHIGAN (Zone 2) INGHAM COUNTY TRIAL

GRAIN — 36", 30", 18" ROWS

One, Two, and Three Year Averages — 1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre								
	1970	2 Yrs.	3 Yrs.	36" rows			30" rows			18" rows		
				1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.
Michigan 280	21.0	23	24	101.7	103	108	113.9	112	121	110.6	111	115
Michigan 275-2X (2X)	21.4	22	24	94.7	104	111	114.8	116	122	107.5	113	119
Michigan 270	21.8	22	23	80.5	81	87	85.9	83	86	91.3	93	102
Northrup King PX20 (2X)	22.0	—	—	92.4	—	—	107.0	—	—	112.5	—	—
Michigan 250	22.0	23	24	91.8	96	101	108.5	103	104	103.6	100	103
Michigan 300	22.4	23	25	97.0	99	103	110.7	108	108	108.3	114	119
Moews SM220 (2X)	22.8	—	—	106.5	—	—	122.4	—	—	128.7	—	—
Northrup King PX476 (3X)	23.6	25	—	92.2	99	—	103.4	100	—	109.0	108	—
Acco UC1900 (2X)	23.6	—	—	104.6	—	—	129.7	—	—	125.3	—	—
Blaney B401 (2X)	23.6	25	27	98.1	109	111	117.1	115	116	110.4	111	119
Michigan 380-3X (3X)	23.7	—	—	105.7	—	—	126.1	—	—	121.4	—	—
2Acco UC2300 (2X)	24.1	—	—	119.1	—	—	122.7	—	—	117.3	—	—
Michigan 402-2X (2X)	24.1	26	28	111.2	116	117	116.4	127	130	117.7	124	131
DeKalb XL306 (3X)	24.5	26	28	86.1	92	94	87.7	98	103	84.8	93	99
1Mich. Exp. 67-780 (3X)	24.7	26	—	121.7	128	—	133.3	133	—	131.0	137	—
Michigan 400	24.8	26	27	108.6	113	109	117.1	114	121	114.5	117	117
Funk Bros. G4287 (3X)	24.8	26	27	103.7	104	104	120.9	112	110	112.8	105	111
Funk Bros. G4240 (2X)	24.9	26	—	97.4	100	—	115.0	114	—	105.3	113	—
Bo-Jac X13 (3X)	25.0	—	—	103.4	—	—	119.3	—	—	110.1	—	—
Funk Bros. G4252 (3X)	25.1	—	—	78.6	—	—	89.5	—	—	97.5	—	—
Michigan 463-3X (3X)	25.1	27	29	101.5	112	112	111.0	117	116	105.0	115	118
Pioneer 3775 (2X)	25.2	28	30	102.9	114	114	122.5	131	131	126.8	136	135
1Northrup King PX519 (Sp.)	25.3	28	30	117.6	110	118	135.2	122	130	132.5	125	139
Super Crost S19 (2X)	25.3	27	28	107.7	115	119	135.8	128	133	119.1	129	128
3Pioneer 3773 (2X)	25.4	28	29	108.8	109	115	127.5	129	139	133.4	138	145
Cowbell 300-3X (2X)	25.4	26	—	90.5	104	—	112.9	120	—	106.5	114	—
Cargill 566	25.5	—	—	104.8	—	—	131.9	—	—	123.7	—	—
Wolverine W175 (2X)	25.9	29	—	103.9	117	—	110.7	128	—	102.2	127	—
Cowbell 1125X (2X)	25.9	28	30	117.2	125	129	115.7	123	131	111.4	120	123
Migro M-125X (2X)	25.9	28	30	115.8	111	105	119.6	121	116	119.6	117	110
DeKalb XL24 (2X)	25.9	—	—	96.8	—	—	116.0	—	—	121.0	—	—
Cargill 590	25.9	—	—	75.0	—	—	97.0	—	—	103.0	—	—
DeKalb XL315 (3X)	25.9	27	29	88.8	95	95	103.3	105	109	93.4	99	106
Cargill 666	26.0	—	—	104.1	—	—	125.4	—	—	126.1	—	—
1.2.3Blaney 6606A (2X)	26.0	28	30	130.0	133	136	144.8	150	152	139.6	142	148
Funk Bros. G4222 (2X)	26.0	28	29	100.8	109	112	96.8	112	118	101.0	110	119
1Michigan 500-2X (2X)	26.0	28	30	120.1	123	131	123.5	133	139	124.2	134	146
3OYO 360 (3X)	26.1	29	31	108.3	115	114	127.1	131	126	133.0	130	131
DeKalb XL325 (3X)	26.2	28	30	88.6	97	99	106.9	114	114	98.1	109	110
1Blaney B601 (2X)	26.2	28	30	122.2	130	133	123.3	127	130	128.9	129	133
2Northrup King PX525 (Sp.)	26.2	28	30	118.0	131	135	134.7	147	154	125.1	137	148
2Blaney 6905A (2X)	26.3	28	—	116.5	114	—	134.8	125	—	128.8	119	—
1Michigan 555-3X (3X)	26.3	28	30	120.6	129	135	134.1	139	144	124.3	131	143
Cowbell 2065X (2X)	26.3	29	30	117.7	120	125	128.3	130	135	120.5	128	126
Blaney 6616 (3X)	26.5	—	—	102.7	—	—	117.4	—	—	122.6	—	—
Wolverine W170 (2X)	26.5	29	—	107.0	113	—	126.7	130	—	120.0	125	—
Blaney B-AA (2X)	26.6	28	—	109.8	114	—	104.6	122	—	108.4	124	—
Migro M-1010SX (2X)	26.6	28	—	112.2	118	—	128.7	126	—	132.9	132	—
1.2.3Michigan 568-3X (3X)	26.7	28	30	129.1	125	129	135.8	151	133	135.1	128	133
Moews Sm229 (2X)	26.8	—	—	114.4	—	—	132.1	—	—	131.5	—	—
Jacques JX162 (2X)	26.8	—	—	109.0	—	—	121.5	—	—	126.5	—	—
1.2.3Trojan SX102 (2X)	27.1	—	—	129.6	—	—	138.3	—	—	140.9	—	—
Cowbell 307-3X (3X)	27.1	—	—	109.8	—	—	122.3	—	—	126.7	—	—
1.2.3Bo-Jac X2E (2X)	27.2	—	—	120.0	—	—	142.6	—	—	139.5	—	—
Super Crost 233 (3X)	27.3	30	—	103.1	113	—	120.1	127	—	115.5	127	—
1.2.3Funk Bros. G4444 (2X)	27.3	28	—	132.6	143	—	140.4	146	—	143.1	144	—
1.2Pride R407 (2X)	27.4	30	31	126.6	131	126	135.0	132	131	132.8	131	136
1.3Acco UC3300 (2X)	27.5	—	—	132.2	—	—	127.3	—	—	133.5	—	—
3Wolverine W176 (2X)	27.5	29	—	115.0	118	—	133.0	138	—	137.9	143	—
2DeKalb XL23 (2X)	27.6	—	—	110.3	—	—	125.6	—	—	126.4	—	—
Super Crost S27 (2X)	27.6	29	30	109.1	116	123	127.8	128	135	130.1	131	129
3Northrup King PX50 (2X)	27.8	—	—	103.6	—	—	129.4	—	—	134.7	—	—
DeKalb XL45 (2X)	27.9	30	32	102.9	109	114	126.1	124	129	122.6	120	126
P.A.G. SX52 (2X)	28.0	30	32	91.6	104	110	116.0	125	129	107.9	117	119
1Pride R450 (2X)	28.1	30	31	123.1	126	129	133.3	132	136	131.6	133	131
3DeKalb XL45A (2X)	28.2	—	—	112.5	—	—	131.5	—	—	136.5	—	—
OYO 333 (2X)	28.6	—	—	119.2	—	—	108.8	—	—	122.7	—	—
1.3Pioneer 3579 (2X)	28.7	—	—	122.2	—	—	131.1	—	—	138.9	—	—
1.2Migro M540	28.9	—	—	132.8	—	—	140.3	—	—	132.2	—	—
1.2.3Pioneer 3561 (2X)	29.6	—	—	129.5	—	—	139.0	—	—	143.9	—	—

(Continued on next page)

Table 9 — INGHAM COUNTY TRIALS (Continued)

Hybrid	% Moisture			Bushels per acre								
	1970	2 Yrs.	3 Yrs.	36" rows			30" rows			18" rows		
				1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.
Average	26.1	27	29	107.8	115	115	121.5	125	125	120.5	124	125
Range	21.0	22	23	75.0	81	87	85.9	83	86	84.8	93	102
	to	to	to	to	to	to	to	to	to	to	to	to
	29.6	30	31	132.8	143	134	144.8	151	154	143.1	150	148
Least significant difference	0.9	0.7	0.7	11.6	6	5	13.0	6	5	12.6	6	5

1Significantly better than average yield in 36" rows in 1970.

2Significantly better than average yield in 30" rows in 1970.

3Significantly better than average yield in 18" rows in 1970.

	1970	1969	1968
Planted	April 28	May 5	May 4
Harvested	Oct. 2	Oct. 8	Oct. 5
Soil type	Conover clay loam	Conover clay loam	Conover clay loam
Previous crop	Corn	Corn	Corn
Rows	36", 30", 18"	36", 30", 18"	36", 30", 18"
Population	36" = 20,000 30" = 19,700 18" = 20,200	36" = 19,400 30" = 19,800 18" = 19,500	36" = 19,500 30" = 19,800 18" = 19,300
Fertilizer	158-85-85*	185-70-70*	150-60-60
Soil test: pH	6.4	7.0	6.6
P	95 (very high)	41 (high)	59 (high)
K	199 (high)	224 (high)	316 (high)

Farm Cooperator: Michigan State University, East Lansing

*Acknowledgment: Anhydrous ammonia donated by Klein Fertilizer Co., Fowlerville, Michigan

Table 10. SOUTH CENTRAL MICHIGAN (Zone 2) SILAGE — INGHAM COUNTY TRIAL
One, Two, and Three Year Averages — 1970, 1969, 1968

Hybrid	% Moisture in ears			Tons per acre						% Ears in dry weight		
	1970	2 Yrs.	3 Yrs.	Green weight			Dry weight			1970	2 Yrs.	3 Yrs.
				1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.			
Michigan 280	22.0	27	31	9.5	11.6	12.2	6.4	7.1	6.7	60.7	61	61
Michigan 275-2X (2X)	22.9	30	33	8.7	10.5	11.2	6.0	6.4	6.1	59.8	60	63
Northrup King PX20 (2X)	23.6	—	—	8.0	—	—	5.7	—	—	57.4	—	—
Michigan 270	24.0	28	32	8.9	10.4	10.6	5.4	5.9	5.5	59.4	60	60
Michigan 300	25.6	31	35	10.9	11.8	11.8	6.8	7.0	6.2	56.3	59	59
Michigan 250	26.1	30	33	10.1	11.0	11.4	6.1	6.3	5.9	53.8	56	57
Northrup King PX476 (3X)	26.7	33	—	7.1	10.8	—	4.8	6.0	—	60.5	56	—
Michigan 380-3X (3X)	27.1	—	—	10.3	—	—	6.6	—	—	58.0	—	—
Moews SM220 (2X)	28.0	—	—	11.2	—	—	6.5	—	—	62.4	—	—
Michigan 400	28.5	35	37	11.9	13.9	13.3	6.4	7.1	6.6	52.7	56	56
Blaney B401 (2X)	28.6	36	38	9.9	12.6	13.0	5.7	6.5	6.1	62.6	59	59
Michigan 402-2X (2X)	28.6	36	38	10.4	13.2	13.5	6.1	6.5	6.2	60.2	60	61
DeKalb XL306 (3X)	29.0	35	37	8.6	10.7	11.8	4.6	5.5	5.4	56.0	51	53
Cargill 590	29.0	—	—	7.4	—	—	5.0	—	—	65.6	—	—
Mich. Exp. 67-780 (3X)	29.5	37	—	13.7	15.3	—	7.9	7.8	—	53.9	52	—
Acco UC2300 (2X)	30.0	—	—	12.1	—	—	6.6	—	—	58.0	—	—
Funk Bros. G4287 (3X)	30.1	35	37	8.1	10.1	11.5	5.0	5.8	5.8	64.6	64	62
Bo-Jac X13 (3X)	30.2	—	—	10.2	—	—	6.0	—	—	55.1	—	—
Cowbell 300-3X (3X)	30.3	37	—	10.8	13.1	—	5.8	6.5	—	53.8	53	—
Cowbell 307-3X (3X)	30.5	—	—	14.0	—	—	7.5	—	—	56.7	—	—
Acco UC1900 (2X)	30.6	—	—	12.6	—	—	7.1	—	—	54.7	—	—
Funk Bros. G4240 (2X)	30.7	37	—	9.2	9.8	—	5.2	5.0	—	61.5	57	—
Funk Bros. G4222 (2X)	30.7	38	40	10.2	12.3	13.5	5.7	6.1	6.0	60.2	58	58
Blaney 6606A (2X)	30.8	39	41	9.7	13.5	13.6	5.7	6.6	6.2	64.2	56	57
DeKalb XL24 (2X)	31.0	—	—	9.6	—	—	5.8	—	—	59.7	—	—
Pioneer 3775 (2X)	31.0	39	41	11.1	13.2	14.1	6.4	6.9	6.6	60.4	52	53
Funk Bros. G4252 (3X)	31.0	—	—	11.2	—	—	6.1	—	—	52.6	—	—
Blaney 6616 (3X)	31.0	—	—	14.0	—	—	7.9	—	—	57.0	—	—
Michigan 463-3X (3X)	31.0	37	39	11.0	12.8	12.9	6.3	6.6	6.2	61.5	59	59
Pioneer 3773 (2X)	31.1	40	42	11.7	14.6	15.0	7.2	7.6	6.9	60.3	54	56
Northrup King PX519 (Sp.)	31.3	41	43	14.2	15.7	16.0	7.6	7.4	6.9	58.7	52	54
Cowbell 206SX (2X)	31.3	40	42	12.1	14.0	14.2	6.8	6.8	6.3	61.1	57	58
Super Crost S19 (2X)	31.3	38	40	11.7	13.8	13.8	6.8	7.1	6.6	62.9	56	58
DeKalb XL315 (3X)	31.4	41	42	9.4	12.1	11.8	5.3	5.4	5.1	61.6	57	59
Wolverine W175 (2X)	31.5	40	—	10.7	15.3	—	6.1	7.0	—	60.3	52	—
Blaney B-AA (2X)	31.5	39	—	11.9	14.7	—	6.7	7.3	—	60.8	54	—
Jacques JX162 (2X)	31.5	—	—	9.8	—	—	5.6	—	—	60.2	—	—
Michigan 500-2X (2X)	31.6	38	40	12.1	14.7	15.7	6.4	7.0	6.7	60.1	55	58
Super Crost S27 (2X)	31.8	39	41	9.9	13.2	13.6	5.7	6.6	6.3	57.9	56	57
Cowbell 112SX (2X)	31.9	35	38	12.3	13.6	14.6	6.8	7.2	6.8	62.0	56	57
DeKalb XL23 (2X)	32.0	—	—	11.5	—	—	6.6	—	—	60.0	—	—
Blaney 6905A (2X)	32.0	38	—	14.4	16.3	—	7.3	7.5	—	58.4	51	—
Migro M-12SX (2X)	32.0	39	42	11.6	15.0	15.5	6.0	7.1	6.5	63.0	53	54
Bo-Jac X2E (2X)	32.2	—	—	11.5	—	—	6.5	—	—	58.4	—	—
Trojan SX102 (2X)	32.3	—	—	14.1	—	—	7.6	—	—	59.3	—	—
Migro M-1010SX (2X)	32.5	37	—	12.7	14.2	—	7.1	8.0	—	60.1	56	—
Acco UC3300 (2X)	32.6	—	—	15.4	—	—	8.3	—	—	56.4	—	—
Cargill 666	32.7	—	—	12.7	—	—	7.0	—	—	59.4	—	—
Moews SM229 (2X)	32.7	—	—	14.1	—	—	7.8	—	—	59.3	—	—
Michigan 568-3X (3X)	32.7	39	42	13.9	15.2	16.3	7.0	7.0	6.7	62.4	58	58
Northrup King PX525 (Sp.)	32.8	39	41	12.7	15.0	15.4	7.2	7.6	7.0	57.5	51	53
Wolverine W176 (2X)	32.9	41	—	12.3	13.9	—	6.4	6.5	—	61.6	53	—
Blaney B601 (2X)	32.9	39	41	15.7	17.5	17.2	7.5	7.9	7.4	52.2	51	52
Cargill 566	33.0	—	—	8.9	—	—	4.9	—	—	59.3	—	—
Northrup King PX50 (2X)	33.2	—	—	9.8	—	—	5.4	—	—	61.9	—	—
Michigan 555-3X (3X)	33.2	39	42	14.3	16.5	17.7	7.0	7.5	7.1	60.2	58	59
Pride R407 (2X)	33.3	40	43	13.7	16.5	16.3	7.0	7.7	6.9	61.3	56	56
DeKalb XL325 (3X)	33.5	40	42	8.6	12.3	12.6	4.9	6.1	5.6	61.3	58	59
Wolverine W170 (2X)	33.6	42	—	9.8	13.7	—	5.0	6.0	—	55.5	54	—
Pride R450 (2X)	33.8	41	44	15.6	16.3	17.3	8.0	7.4	7.1	56.7	53	54
DeKalb XL45A (2X)	34.4	—	—	10.4	—	—	5.6	—	—	60.9	—	—
DeKalb XL45 (2X)	34.5	41	43	9.7	13.2	14.0	5.5	6.2	5.8	57.8	54	55
P.A.G. SX52 (2X)	34.7	42	43	11.5	13.5	14.6	5.9	6.3	6.1	59.1	57	57
Funk Bros G4444 (2X)	35.0	40	—	13.3	14.4	—	7.1	7.1	—	57.6	56	—
Pioneer 3561 (2X)	35.4	—	—	15.6	—	—	7.7	—	—	52.5	—	—
Super Crost 233 (3X)	35.4	40	—	12.4	15.5	—	6.9	7.4	—	56.1	51	—
OYO 333 (2X)	36.8	—	—	14.9	—	—	7.4	—	—	59.9	—	—
OYO 360 (3X)	37.2	43	46	12.7	15.9	16.2	6.7	7.1	6.7	57.7	53	54
Pioneer 3579 (2X)	37.4	—	—	13.6	—	—	6.8	—	—	53.7	—	—
Migro M540	38.5	—	—	17.2	—	—	8.2	—	—	51.2	—	—
Average	31.3	38	40	11.5	14.0	14.1	6.4	6.9	6.4	58.9	55	57
Range	22.0	27	31	7.1	9.8	10.6	4.6	5.0	5.1	51.2	51	52
	to	to	to	to	to	to	to	to	to	to	to	to
	38.5	43	46	17.2	19.8	17.7	8.3	9.2	7.4	65.6	64	62
Least significant difference	1.3	1.3	1.1	1.1	0.7	0.5	0.6	0.4	0.4	3.4	2	2
	1970	1969	1968									
Planted	April 28	May 5	May 4									
Harvested	Sept. 11	Sept. 11	Sept. 19									
Soil type	Conover clay loam	Conover clay loam	Conover clay loam									
Previous crop	Corn	Corn	Corn									
Rows	36"	36"	36"									
Population	19,900	19,500	19,600									
Fertilizer	138-75-75*	185-70-70*	150-60-60									
Soil test: pH	6.4	7.0	6.6									
P	95 (very high)	41 (high)	59 (high)									
K	199 (high)	224 (high)	316 (high)									
Farm Cooperator:	Michigan State University, East Lansing											
*Acknowledgment:	Anhydrous ammonia donated by Klein Fertilizer Co., Fowlerville, Michigan											

Table 11. **SOUTH CENTRAL MICHIGAN** (Zone 2)
INGHAM COUNTY TRIAL —
HIGH LYSINE HYBRIDS
One Year — 1970

Hybrid	% Moisture	Bushels per acre	% Stalk lodging
High lysine:			
Michigan 510-2XHL (2X)	31.9	102.2	10.0
Northrup King Sp. 53 (Sp.)	33.7	124.4	13.4
Northrup King 06622 (2X)	36.4	117.9	3.7
Migro MHL33SX (2X)	36.5	118.2	6.4
Migro MHL22SX (2X)	36.8	90.7	7.1
Normal:			
Michigan 500-2X (2X)	29.0	115.9	8.2
Migro M12SX (2X)	30.9	94.8	8.1
Northrup King PX50 (2X)	31.4	111.8	8.4
Least significant difference	0.9	10.5	

Planted = May 22
Harvested = Oct. 9
Soil type = Conover loam
Previous crop = corn
Rows = 36"
Population = 20,100
Fertilizer = 158-85-85
Soil test: pH = 6.8 P = 27 (medium) K = 105 (low)
Farm Cooperator: Michigan State University, East Lansing

Table 12. **NORTH CENTRAL MICHIGAN** (Zone 3)
SANILAC COUNTY TRIAL
One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.	
Michigan 270	21.2	23	22	99.2	98	102	11.9	9	9	5.5
Michigan 300	21.2	24	23	109.5	105	107	4.9	5	4	4.5
Michigan 275-2X (2X)	21.7	23	23	105.0	107	118	7.8	4	5	3.0
Michigan 280	21.8	24	23	119.4	108	117	11.8	8	6	4.3
Michigan 250	21.9	24	23	100.5	96	101	6.8	4	5	4.3
Northrup King PX20 (2X)	22.1	—	—	105.6	—	—	3.0	—	—	5.5
Asgrow SX108 (2X)	22.3	24	—	84.2	78	—	10.4	6	—	6.0
Michigan 380-3X (3X)	22.6	—	—	111.3	—	—	11.5	—	—	3.3
Northrup King PX446 (Sp.)	22.6	25	24	117.6	109	116	6.5	4	3	5.3
Northrup King PX417 (3X)	22.8	24	23	80.1	91	96	15.1	11	8	5.8
Asgrow ATC35A (3X)	23.0	25	—	88.1	90	—	3.5	2	—	5.3
P.A.G. 27 (3X)	23.0	—	—	93.9	—	—	10.7	—	—	5.5
Northrup King PX428 (3X)	23.0	24	—	95.0	79	—	7.9	5	—	5.5
Northrup King PX442 (Sp.)	23.0	25	24	106.8	96	106	4.6	3	3	5.5
Oxy SX352 (2X)	23.0	—	—	113.5	—	—	7.9	—	—	5.3
Northrup King PX476 (3X)	23.1	26	—	106.6	105	—	2.9	1	—	4.3
Pioneer 3911 (2X)	23.2	—	—	116.6	—	—	5.4	—	—	2.0
Funk Bros. G4175 (3X)	23.2	—	—	89.7	—	—	8.0	—	—	6.0
Pioneer 3956 (2X)	23.4	26	25	111.4	108	118	21.0	11	8	6.0
DeKalb XL12 (2X)	23.5	—	—	111.3	—	—	0.6	—	—	2.0
Pioneer 3959 (3X)	23.6	26	—	110.8	99	—	15.3	10	—	5.8
P.A.G. SX48 (2X)	23.6	25	24	100.5	95	104	6.4	4	5	5.3
P.A.G. 34 (3X)	23.7	—	—	121.0	—	—	6.0	—	—	4.8
Jacques 905E	23.8	—	—	106.2	—	—	5.3	—	—	4.8
DeKalb XL304 (3X)	24.0	27	26	112.0	108	109	8.3	5	4	5.5
Michigan 402-2X (2X)	24.0	27	26	117.7	118	127	7.2	5	4	4.0
Michigan 400	24.1	27	26	112.0	113	120	6.7	4	4	3.3
*Asgrow ASC43 (Sp.)	24.3	—	—	131.1	—	—	4.1	—	—	4.0
Asgrow ATC39 (3X)	24.3	—	—	107.7	—	—	1.8	—	—	5.0
Funk Bros. G4287 (3X)	24.3	28	26	122.0	106	113	7.1	5	4	4.5
Asgrow 6G5 (2X)	24.5	—	—	103.9	—	—	2.5	—	—	4.3
*Mich. Exp. 67-780 (3X)	24.5	—	—	150.5	—	—	4.1	—	—	2.0
*Pioneer 3909 (2X)	24.6	—	—	130.3	—	—	1.2	—	—	2.0
Oxy 22	24.8	—	—	126.6	—	—	4.1	—	—	3.5
*Oxy SX362 (2X)	24.8	27	26	138.5	126	131	1.2	1	2	4.3
Oxy 16	24.9	28	—	96.6	87	—	5.4	3	—	5.3
*Funk Bros. G4240 (2X)	24.9	28	—	133.7	117	—	6.6	3	—	4.3
Pioneer 3799 (3X)	25.0	—	—	105.1	—	—	6.5	—	—	2.5
*Pride R290 (2X)	25.1	—	—	143.5	—	—	7.5	—	—	3.5
Michigan 463-3X (3X)	25.3	29	28	127.5	118	123	4.6	3	4	3.3
DeKalb EX14 (2X)	25.7	—	—	110.9	—	—	3.5	—	—	2.5
DeKalb XL315 (3X)	26.0	28	28	103.4	99	108	9.0	7	6	3.5
*Pride R407 (2X)	26.4	30	—	136.6	121	—	1.8	1	—	3.3
*Jacques JX162 (2X)	26.4	—	—	139.2	—	—	3.6	—	—	4.0
Michigan 555-3X (3X)	26.4	30	—	129.2	136	—	8.9	5	—	3.0
*Oxy SX420 (2X)	26.6	—	—	147.1	—	—	6.5	—	—	3.5
*Asgrow 1LX4 (2X)	26.7	30	—	151.9	135	—	3.0	2	—	3.5
*Michigan 500-2X (2X)	26.9	30	29	145.0	130	138	3.5	3	2	2.8
*Oxy SX477 (2X)	27.1	—	—	134.7	—	—	3.6	—	—	3.3
*Michigan 568-3X (3X)	27.1	30	—	141.8	128	—	2.4	2	—	3.0
*Pioneer 3773 (2X)	27.3	30	30	149.6	131	141	5.9	3	2	3.0
Average	24.2	27	25	116.5	116	116	6.4	4	4	4.0
Range	21.2	23	22	80.1	78	96	0.6	1	2	2.0
	27.3	30	30	151.9	146	141	21.0	11	9	6.0
Least significant difference	0.9	0.6	0.5	13.2	6	4				

*Significantly better than average yield in 1970.

	1970	1969	1968
Planted	May 5	May 17	May 6
Harvested	Nov. 5	Oct. 28	Oct. 29
Soil type	Brookston clay loam	Brookston clay loam	Brookston clay loam
Previous crop	Corn	Corn	Corn
Population	19,300	19,000	18,900
Rows	30"	30"	30"
Fertilizer	117-68-188	155-60-60	143-70-160
Soil test: pH	6.8	6.5	6.5
P	57 (high)	51 (high)	54 (high)
K	274 (high)	138 (medium)	136 (medium)

Farm Cooperator: Orville Orchard, Applegate
County Extension Director: Rex Sieting, Sandusky

Table 13. NORTH CENTRAL MICHIGAN (Zone 3) SAGINAW COUNTY TRIAL

One, Two, and Three Year Averages — 1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre						Stalk lodging %						Blight rating
	2		3	1970		2 Years		3 Years		1970		2 Years		3 Years		
	1970	Yrs.	Yrs.	20,100	25,400	20,000	25,200	19,800	25,100	19,100	25,400	20,000	25,200	19,800	25,100	
Northrup King PX428 (3X)	19.2	21	—	78.5	77.8	82	76	—	—	20.2	26.8	11	15	—	—	6.0
Weather Master EXP4P (2X)	19.4	—	—	80.2	88.9	—	—	—	—	3.3	3.1	—	—	—	—	5.7
Northrup King PX417 (3X)	19.7	20	21	80.6	86.5	72	77	71	79	19.4	29.7	11	19	9	15	6.0
Northrup King PX446 (Sp.)	19.8	21	21	122.3	123.2	107	103	102	98	2.4	6.5	9	14	6	11	6.0
Northrup King PX476 (3X)	20.0	23	—	115.9	119.9	106	103	—	—	7.4	9.8	5	8	—	—	5.7
Michigan 280	20.0	22	22	130.1	128.4	112	110	113	109	10.1	11.9	7	11	6	8	6.0
Bayless SX210Q (2X)	20.1	—	—	131.2	142.5	—	—	—	—	8.6	9.0	—	—	—	—	6.0
Northrup King PX442 (Sp.)	20.1	22	22	90.3	96.6	89	92	92	99	14.6	16.2	10	13	7	10	6.0
Pride R200A (2X)	20.3	—	—	134.9	121.1	—	—	—	—	5.5	9.7	—	—	—	—	6.0
Michigan 270	20.3	21	21	105.8	99.8	93	90	93	91	12.8	17.1	13	18	12	17	6.0
Northrup King PX20 (2X)	20.5	—	—	108.4	105.8	—	—	—	—	13.0	11.7	—	—	—	—	6.0
Jacques JX962 (2X)	20.6	—	—	135.6	139.3	—	—	—	—	6.3	4.9	—	—	—	—	5.5
Michigan 275-2X (2X)	20.6	21	21	123.8	125.0	115	114	115	117	10.0	13.3	10	10	7	7	6.0
Michigan 250	20.8	22	22	113.5	114.6	102	102	101	105	12.0	16.7	9	11	7	8	6.0
Blaney B401 (2X)	20.8	24	24	118.5	125.4	108	120	108	120	10.5	13.7	6	7	4	5	6.0
Michigan 300	20.8	23	23	105.7	99.7	101	99	100	98	4.8	8.2	6	7	4	6	6.0
Michigan 380-3X (3X)	20.8	—	—	110.6	114.4	—	—	—	—	12.7	7.5	—	—	—	—	5.7
Weather Master EXP3P (2X)	20.9	24	—	105.2	112.3	103	106	—	—	14.2	14.2	10	12	—	—	6.0
1/2Mich. Exp. 67-780 (3X)	20.9	—	—	145.0	155.1	—	—	—	—	5.6	6.1	—	—	—	—	3.2
Wolverine 130 (2X)	21.2	—	—	111.6	119.9	—	—	—	—	26.3	23.5	—	—	—	—	6.0
DeKalb XL306 (2X)	21.2	25	—	86.7	97.5	89	88	—	—	20.5	22.4	12	18	—	—	6.0
Pioneer 3956 (2X)	21.4	23	22	106.6	114.4	99	100	96	98	12.4	18.8	7	10	5	9	6.0
Super Crost S17 (2X)	21.4	—	—	105.3	110.4	—	—	—	—	8.5	13.7	—	—	—	—	6.0
Super Crost 163 (3X)	21.5	—	—	100.2	166.1	—	—	—	—	13.4	16.5	—	—	—	—	6.0
Michigan 400	21.5	24	24	120.9	125.3	118	114	111	112	4.1	6.5	3	6	3	4	6.0
Jacques JX952 (2X)	21.5	—	—	93.6	95.3	—	—	—	—	17.0	20.3	—	—	—	—	6.0
Garno S92 (2X)	21.5	25	—	130.2	136.6	116	123	—	—	13.3	11.8	8	8	—	—	5.8
Pioneer 3911 (2X)	21.6	24	24	130.0	119.1	118	108	116	110	5.6	8.5	12	19	8	14	2.7
1/2Pioneer 3909 (2X)	21.6	—	—	144.3	114.8	—	—	—	—	3.0	5.6	—	—	—	—	2.5
Michigan 402-2X (2X)	21.7	24	24	126.6	128.9	117	117	115	117	11.4	12.8	8	10	6	7	5.8
Wolverine 65	21.7	25	—	127.8	124.4	119	112	—	—	8.3	4.9	8	6	—	—	5.8
Wolverine 59	22.0	25	—	116.5	126.6	116	123	—	—	3.2	4.3	6	3	—	—	5.9
1/2Northrup King PX519 (Sp.)	22.0	—	—	155.3	141.5	—	—	—	—	2.3	9.7	—	—	—	—	5.0
Funk Bros. G4222 (2X)	22.2	—	—	120.0	130.3	—	—	—	—	5.7	5.6	—	—	—	—	5.5
1/2Pride R290 (2X)	22.2	—	—	139.0	143.4	—	—	—	—	4.1	9.4	—	—	—	—	6.0
Michigan 463-3X (3X)	22.2	25	25	128.7	127.0	118	117	112	113	9.0	12.7	9	12	8	9	6.0
2/3Northrup King PX525 (Sp.)	22.2	—	—	133.0	142.0	—	—	—	—	15.5	10.5	—	—	—	—	5.7
1/2Blaney 6905A (2X)	22.2	—	—	152.6	163.2	—	—	—	—	2.3	14.1	—	—	—	—	6.0
1/2Pioneer 3773 (2X)	22.2	26	27	147.7	125.3	139	120	131	124	10.3	13.0	6	7	4	5	5.5
1/2Super Crost S19 (2X)	22.3	25	25	140.9	147.3	116	119	116	119	4.0	12.6	7	9	4	6	5.8
Pioneer 3775 (2X)	22.5	25	26	131.4	134.5	123	128	113	122	12.3	14.8	8	10	5	7	5.8
Garno S90X (2X)	22.7	—	—	126.4	128.6	—	—	—	—	22.2	16.0	—	—	—	—	5.8
Weather Master EXP2P (2X)	22.8	23	—	88.9	83.6	97	93	—	—	31.7	41.8	17	23	—	—	6.0
1/2Asgrow ASX58 (2X)	22.9	26	—	144.5	152.8	127	131	—	—	6.3	8.0	4	5	—	—	6.0
1/2Blaney 6616 (3X)	22.9	—	—	151.4	154.8	—	—	—	—	13.3	15.2	—	—	—	—	5.8
Funk Bros. G4252 (3X)	22.9	25	—	99.0	114.4	95	94	—	—	2.4	6.6	8	10	—	—	4.8
Pioneer 371	23.0	26	27	118.0	117.5	111	105	111	106	20.2	18.5	13	12	9	8	6.0
1/2Jacques JX162 (2X)	23.2	—	—	147.2	138.8	—	—	—	—	4.8	4.2	—	—	—	—	6.0
1/2Blaney 6606A (2X)	23.4	28	27	159.6	158.3	134	134	127	131	1.6	6.6	3	6	2	4	5.8
1/2Super Crost S29 (2X)	23.5	—	—	145.9	148.0	—	—	—	—	4.8	7.6	—	—	—	—	5.7
1/2Michigan 500-2X (2X)	23.5	27	27	141.7	147.1	133	138	130	136	5.5	7.7	4	7	3	5	5.7
1/2Blaney B-AA (2X)	23.6	—	—	151.5	159.4	—	—	—	—	7.4	8.5	—	—	—	—	6.0
1/2Michigan 555-3X (3X)	23.6	28	28	146.8	135.4	137	131	138	139	9.3	8.4	7	8	5	6	6.0
Blaney B601 (2X)	23.9	—	—	129.5	132.0	—	—	—	—	8.7	7.8	—	—	—	—	6.0
Wolverine W170 (2X)	23.9	—	—	129.2	130.6	—	—	—	—	7.5	12.2	—	—	—	—	5.4
1/2Michigan 568-3X (3X)	23.9	27	27	146.1	144.2	133	127	130	126	6.9	3.5	4	4	3	3	4.3
1/2Garno S96 (2X)	24.0	—	—	144.7	149.6	—	—	—	—	7.9	12.0	—	—	—	—	5.0
1/2Super Crost S27 (2X)	24.0	—	—	142.4	132.5	—	—	—	—	4.8	4.3	—	—	—	—	5.7
Funk Bros. G4333 (2X)	24.3	28	28	103.0	112.4	108	117	112	121	8.8	6.5	6	5	5	3	5.9
1/2Northrup King KE497	24.3	27	26	145.7	132.4	111	102	109	106	6.3	10.9	9	15	7	11	6.0
2/3DeKalb XL23 (2X)	24.6	—	—	132.5	143.2	—	—	—	—	6.6	7.2	—	—	—	—	2.9
DeKalb XL24 (2X)	25.2	27	—	128.1	137.4	120	118	—	—	9.8	13.3	6	12	—	—	6.0
2/3Pioneer 3561 (2X)	25.2	—	—	133.7	142.5	—	—	—	—	3.0	4.9	—	—	—	—	2.7
1/2Funk Bros G4444 (2X)	25.3	—	—	161.8	171.2	—	—	—	—	4.0	5.0	—	—	—	—	2.3
DeKalb XL45 (2X)	26.0	29	29	117.9	110.0	119	113	116	117	6.2	8.1	3	5	2	3	6.0
1/2Pioneer 3579 (2X)	26.0	—	—	165.1	166.0	—	—	—	—	3.5	6.0	—	—	—	—	3.8
Average	22.2	25	25	124.6	127.7	112	111	111	112	9.4	11.5	8	10	6	8	5.0
Range	19.2	20	21	78.5	77.8	72	76	71	79	1.6	1.8	1	3	2	3	2.3
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to
	26.0	29	29	165.1	171.2	139	140	138	139	31.7	41.8	17	23	12	17	6.0
						6	4	4								

1Significantly better than average yield at 20,100 population in 1970.

2Significantly better than average yield at 25,400 population in 1970.

Planted
 Harvested
 Soil type
 Previous crop
 Population
 Rows
 Fertilizer
 Soil test: pH
 P
 K

1970
 May 4
 Oct. 24
 Brookston clay loam
 Sugar beets
 20,100 and 25,400
 30"
 149-96-48
 7.5
 50 (high)
 489 (very high)

1969
 May 23
 Oct. 20
 Brookston clay loam
 Corn
 19,800 and 25,000
 30"
 151-106-50
 7.4
 50 (high)
 230 (medium)

1968
 May 7
 Oct. 22
 Brookston clay loam
 Oats seeded to clover
 19,400 and 24,900
 30"
 119-112-54
 7.3
 50 (high)
 157 (medium)

Farm Cooperator: Walter Reinbold & Sons, Reese

County Extension Director: Ray Vasold, Saginaw

Table 14. NORTH CENTRAL MICHIGAN (Zone 3)
GRAIN — HURON COUNTY TRIAL

One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre			% Stalk lodging			Blight rating
	1970	2	3	1970	2	3	1970	2	3	
Northrup King PX417 (3X)	19.1	20	21	64.2	66	53	3.9	20	28	5.5
Michigan 200	19.7	20	—	71.1	63	—	0.0	8	—	5.5
Michigan 270	19.9	21	20	78.6	72	59	8.7	13	21	5.8
Michigan 275-2X (2X)	19.9	21	21	106.2	97	80	10.7	20	27	5.0
Michigan 280	20.0	22	21	104.6	106	87	7.2	10	14	5.0
Northrup King PX20 (2X)	20.0	—	—	97.8	—	—	0.0	—	—	5.5
Northrup King PX442 (Sp.)	20.1	21	21	76.3	69	55	12.0	10	12	5.0
Funk Bros. G4175 (3X)	20.3	—	—	100.0	—	—	17.4	—	—	6.0
Michigan 250	20.6	22	21	97.7	92	75	5.6	13	19	4.0
P.A.G. SX48 (2X)	20.7	22	23	101.9	84	73	6.8	24	35	5.0
OXY SX352 (2X)	20.7	—	—	111.2	—	—	4.7	—	—	6.0
Michigan 380-3X (3X)	20.8	—	—	113.0	—	—	8.9	—	—	5.5
Wolverine 25	20.9	—	—	96.0	—	—	13.1	—	—	6.0
Northrup King PX428 (3X)	21.0	22	—	81.1	75	—	0.8	2	—	6.0
Northrup King PX446 (Sp.)	21.1	22	22	105.8	93	79	6.5	13	27	6.0
Jacques 905E	21.4	—	—	91.0	—	—	5.6	—	—	5.0
Michigan 300	21.5	23	22	112.1	99	80	4.6	10	16	4.0
Jacques JX952 (2X)	21.8	—	—	91.6	—	—	1.6	—	—	6.0
Jacques JX863 (3X)	22.0	—	—	88.2	—	—	3.9	—	—	6.0
Pioneer 3956 (2X)	22.2	—	—	83.0	—	—	12.4	—	—	6.0
Teweles 232	22.4	23	—	76.5	71	—	5.6	11	—	5.8
Super Crost 31A	22.4	23	—	80.5	74	—	15.6	12	—	5.3
Northrup King PX480 (Sp.)	22.5	24	—	113.5	101	—	10.9	23	—	6.0
Northrup King PX476 (3X)	23.2	24	—	80.1	76	—	0.8	7	—	4.3
OXY SX362 (2X)	23.5	26	26	93.0	85	71	0.0	5	15	5.0
Michigan 400	23.5	24	24	102.5	96	80	1.6	2	5	4.0
*Mich. Exp. 67-780 (3X)	23.5	—	—	132.1	—	—	0.8	—	—	3.0
Funk Bros. G4252 (3X)	23.6	24	—	108.2	96	—	4.7	10	—	3.0
Weather Master EP30 (3X)	23.6	—	—	88.8	—	—	18.6	—	—	6.0
Northrup King PX525 (Sp.)	23.7	—	—	84.8	—	—	8.9	—	—	3.0
*Super Crost S19 (2X)	23.8	25	25	126.6	111	91	0.0	3	12	5.0
*Pioneer 3909 (2X)	23.9	—	—	117.8	—	—	6.5	—	—	2.3
Michigan 402-2X (2X)	24.1	24	24	109.6	102	84	6.3	14	21	4.0
Wolverine 46A	24.2	24	24	92.9	84	68	4.9	9	12	4.0
*Pride R290 (2X)	24.2	—	—	127.1	—	—	2.4	—	—	5.0
Michigan 463-3X (3X)	24.2	25	26	103.8	94	76	7.3	11	16	5.0
Jacques JX1052E	24.6	—	—	109.6	—	—	0.8	—	—	3.0
Pride R200A (2X)	24.8	—	—	104.4	—	—	0.8	—	—	5.0
DeKalb XL15A (2X)	24.9	24	—	113.2	104	—	0.8	4	—	4.0
Northrup King KE497	25.0	—	—	111.4	—	—	14.4	—	—	5.0
Pioneer 3773 (2X)	25.6	27	27	103.9	95	84	0.0	4	11	3.0
DeKalb XL315 (3X)	26.1	—	—	89.4	—	—	3.1	—	—	5.0
*Jacques JX162 (2X)	26.2	—	—	122.5	—	—	2.4	—	—	4.5
*OXY SX420 (2X)	26.3	—	—	121.9	—	—	0.8	—	—	3.0
*Michigan 500-2X (2X)	26.3	27	27	117.4	112	95	5.1	10	12	3.5
Michigan 555-3X (3X)	26.7	28	28	112.6	114	96	8.6	17	17	3.5
OXY SX477 (2X)	26.8	—	—	111.8	—	—	4.7	—	—	4.0
*Super Crost S27 (2X)	27.0	26	27	126.1	113	90	0.8	8	14	5.0
*Michigan 568-3X (3X)	27.0	28	28	128.1	110	95	2.5	14	14	3.0
DeKalb XL325 (3X)	27.1	27	—	112.6	90	—	5.0	14	—	5.0
Super Crost 233 (3X)	27.6	27	—	112.2	101	—	0.0	2	—	4.5
*Migro M1010A (2X)	28.6	—	—	126.2	—	—	0.8	—	—	5.0
*Migro M540	28.9	—	—	132.1	—	—	2.4	—	—	3.0
Average	23.4	24	24	102.8	96	78	5.3	10	17	4.5
Range	19.1	20	20	64.2	66	53	0.0	2	5	2.3
	to	to	to	to	to	to	to	to	to	to
	28.9	28	28	132.1	119	96	18.6	24	35	6.0
Least significant difference	0.8	0.6	0.5	11.3	6	4				

*Significantly better than average yield in 1970.

	1970	1969	1968
Planted	May 8	May 1	May 1
Harvested	Oct. 16	Oct. 16	Oct. 19
Soil type	Brookston clay loam	Brookston clay loam	Brookston loam
Previous crop	Corn	Corn	Corn
Rows	30"	30"	30"
Population	19,800	19,600	18,300
Fertilizer	134-69-120	157-64-120	165-115-240
Soil test: pH	7.3	7.4	7.5
P	33 (medium)	50 (high)	116 (very high)
K	220 (high)	230 (high)	295 (high)

Farm Cooperator: William McCrea, Bad Axe
County Extension Director: Lee Washefsky, Bad Axe

Table 15. NORTH CENTRAL MICHIGAN (Zone 3)
SILAGE — HURON COUNTY TRIAL

One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture in ears			Tons per acre						% Ears in dry weight		
				Green weight			Dry weight					
	1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.
Northrup King PX417 (3X)	23.9	26	30	6.8	6.6	7.2	4.7	4.7	4.3	67.6	62	53
Michigan 200	24.3	26	—	9.1	8.0	—	5.1	4.9	—	61.8	63	—
Northrup King PX428 (3X)	25.6	28	—	7.9	7.3	—	4.8	4.7	—	57.2	58	—
Wolverine 25	26.3	—	—	7.6	—	—	5.0	—	—	64.3	—	—
Northrup King PX442 (Sp.)	26.7	32	37	8.2	9.1	9.8	5.3	5.7	5.1	63.6	57	48
Michigan 275-2X (2X)	27.0	31	33	10.0	10.4	10.6	6.3	6.4	5.8	64.2	60	53
Northrup King PX446 (Sp.)	27.1	33	38	10.6	10.9	11.3	6.2	6.4	5.8	61.5	58	49
Funk Bros. G4175 (3X)	27.3	—	—	8.0	—	—	4.9	—	—	65.0	—	—
Michigan 280	27.3	32	33	12.4	11.2	12.4	6.9	6.3	6.1	59.7	56	50
Michigan 270	27.6	32	33	10.5	9.3	9.3	6.0	5.5	4.8	58.9	58	53
Michigan 380-3X	27.8	—	—	11.6	—	—	6.9	—	—	65.7	—	—
Pioneer 3909 (2X)	28.1	—	—	12.1	—	—	6.8	—	—	59.0	—	—
Michigan 250	28.2	32	34	11.6	10.8	12.2	6.0	6.0	5.5	59.3	55	48
Jacques 905E	29.1	—	—	9.1	—	—	5.7	—	—	61.7	—	—
Jacques JX952 (2X)	29.1	—	—	9.5	—	—	5.6	—	—	65.1	—	—
Northrup King PX476 (3X)	29.2	36	—	9.4	9.9	—	5.4	5.6	—	61.1	54	—
Super Crost 31A	29.2	35	—	7.9	8.4	—	5.1	5.3	—	64.9	62	—
Michigan 300	29.3	33	35	13.4	12.0	12.1	7.4	6.9	5.9	56.0	54	48
Pioneer 3956 (2X)	29.3	—	—	8.2	—	—	5.0	—	—	57.8	—	—
Teweles 232	29.4	36	—	7.6	7.4	—	4.6	4.4	—	64.5	57	—
OXY SX352 (2X)	30.7	—	—	10.4	—	—	6.0	—	—	60.5	—	—
P.A.G. SX48 (2X)	30.8	34	37	11.4	10.5	11.2	6.2	6.1	5.7	64.1	63	56
Pride R200A (2X)	30.9	—	—	12.1	—	—	6.6	—	—	63.4	—	—
Super Crost S19 (2X)	31.4	39	43	13.6	12.5	12.5	7.4	6.6	5.7	59.1	57	47
Jacques JX863 (3X)	31.5	—	—	8.4	—	—	4.8	—	—	64.4	—	—
Mich. Exp. 67-780 (3X)	31.7	—	—	13.5	—	—	7.5	—	—	60.3	—	—
Northrup King PX480 (Sp.)	31.9	37	—	10.8	10.9	—	6.1	6.1	—	59.8	57	—
Funk Bros. G4252 (3X)	32.1	35	—	12.1	11.1	—	6.8	6.5	—	59.4	54	—
OXY SX362 (2X)	32.2	36	42	11.1	11.2	12.3	5.8	6.1	5.5	60.0	59	51
Pride R290 (2X)	32.5	—	—	12.8	—	—	6.7	—	—	55.9	—	—
Wolverine 46A	32.6	37	41	11.1	10.4	11.0	6.5	5.9	5.3	60.0	55	48
Weather Master EP30 (3X)	32.7	—	—	9.5	—	—	5.6	—	—	61.8	—	—
DeKalb XL15A (2X)	33.0	37	—	12.2	11.1	—	6.4	6.1	—	57.1	57	—
Jacques JX1052E	33.0	—	—	14.9	—	—	7.5	—	—	59.1	—	—
Northrup King PX525 (Sp.)	33.2	—	—	11.6	—	—	6.4	—	—	55.0	—	—
Michigan 402-2X (2X)	33.3	36	39	12.9	12.3	13.2	6.7	6.5	5.9	60.8	56	53
Super Crost S27 (2X)	33.5	39	44	13.9	12.5	14.8	6.9	6.2	6.1	61.9	55	46
Michigan 400	33.6	36	39	14.1	12.7	13.4	6.8	6.4	5.6	56.9	54	49
Michigan 463-3X (3X)	34.2	38	42	15.3	13.5	14.0	7.5	6.8	6.0	57.2	57	51
Michigan 568-3X (3X)	34.3	40	44	16.1	14.5	15.5	7.9	6.8	6.4	59.3	57	49
OXY SX420 (2X)	34.3	—	—	13.7	—	—	7.1	—	—	60.5	—	—
DeKalb XL315 (3X)	34.4	40	—	11.6	11.0	—	6.2	5.9	—	61.5	57	—
Northrup King PX20 (2X)	34.4	—	—	10.4	—	—	5.7	—	—	56.4	—	—
Super Crost 233 (3X)	34.4	38	—	14.9	13.4	—	7.3	6.8	—	60.1	57	—
Northrup King KE497	34.5	—	—	12.7	—	—	6.3	—	—	62.9	—	—
Pioneer 3773 (2X)	35.0	41	46	12.6	12.3	13.9	6.8	6.4	6.0	63.2	56	49
OXY SX477 (2X)	35.1	—	—	15.0	—	—	7.7	—	—	54.3	—	—
Jacques JX162 (2X)	35.1	—	—	15.1	—	—	7.5	—	—	59.9	—	—
DeKalb XL325 (3X)	35.3	—	—	14.9	—	—	7.3	—	—	57.9	—	—
Migro M1010A (2X)	36.1	—	—	15.4	—	—	7.9	—	—	59.4	—	—
Michigan 500-2X (2X)	36.1	40	44	14.7	13.5	14.7	7.4	6.9	6.2	59.0	55	49
Michigan 555-3X (3X)	36.7	42	47	16.8	15.5	17.3	8.1	7.5	7.0	57.4	55	46
Migro M540	39.3	—	—	18.5	—	—	8.6	—	—	51.4	—	—
Average	31.2	36	39	11.9	11.4	12.5	6.4	6.2	5.7	60.1	57	50
Range	23.9 to 39.3	26 to 42	30 to 47	6.8 to 18.5	6.6 to 15.5	7.2 to 17.3	4.6 to 8.6	4.4 to 7.5	4.3 to 7.0	51.4 to 67.6	53 to 63	46 to 56
Least significant difference	1.3	0.9	0.8	1.2	0.9	0.7	.4	.3	.3	3	2	2

Table 16. NORTH CENTRAL MICHIGAN (Zone 3)
MONTCALM COUNTY TRIAL — Irrigated vs Not Irrigated
One, Two, and Three Year Averages — 1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre						Stalk lodging %						Blight rating
	1970	2 Yrs.	3 Yrs.	1970		2 Years		3 Years		1970		2 Years		3 Years		
				Irrig.	Not irrig.	Irrig.	Not. irrig.	Irrig.	Not. irrig.	Irrig.	Not irrig.	Irrig.	Not. irrig.	Irrig.	Not. irrig.	
Michigan 200	18.6	19	—	123.1	90.4	120	80	—	—	3.9	5.5	3	11	—	—	6.0
Northrup King PX442 (Sp.)	21.5	22	—	134.5	99.7	129	93	—	—	7.9	7.5	6	10	—	—	6.0
Michigan 280	21.9	22	23	144.5	95.6	147	93	149	96	7.1	9.5	4	14	4	13	6.0
Northrup King PX417 (3X)	22.0	22	—	94.9	69.6	96	71	—	—	9.4	22.1	9	21	—	—	6.0
Michigan 270	22.1	22	22	113.3	78.2	114	83	117	87	9.8	11.8	10	22	8	15	6.0
2Northrup King PX20 (2X)	22.1	—	—	145.8	114.8	—	—	—	—	5.8	1.5	—	—	—	—	6.0
Northrup King PX476 (3X)	22.4	23	—	140.7	85.6	149	89	—	—	4.0	5.4	2	12	—	—	6.0
Michigan 250	22.4	22	23	138.6	109.4	133	96	137	97	9.6	8.0	8	14	6	12	5.5
Michigan 300	22.6	—	—	134.8	100.0	—	—	—	—	4.7	8.5	—	—	—	—	6.0
Northrup King PX428 (3X)	22.8	21	—	104.0	85.9	109	83	—	—	6.5	20.0	5	16	—	—	6.0
Funk Bros. G4175 (3X)	23.0	—	—	139.4	87.2	—	—	—	—	13.2	13.8	—	—	—	—	6.0
DeKalb XL304 (3X)	23.0	24	25	123.0	70.7	121	73	125	72	8.0	20.0	5	17	4	13	6.0
Michigan 275-2X (2X)	23.0	23	23	140.9	98.7	146	96	151	100	3.9	7.8	4	18	2	15	5.5
Weather Master EPX4P (2X)	23.0	—	—	134.5	97.7	—	—	—	—	0.8	3.1	—	—	—	—	5.3
Northrup King PX446 (Sp.)	23.1	23	24	131.6	105.5	145	103	148	99	6.3	8.2	4	14	3	10	6.0
Pioneer 3956 (2X)	23.1	24	—	119.4	79.8	136	80	—	—	8.6	24.4	4	18	—	—	6.0
Super Crost S17 (2X)	23.2	—	—	150.1	110.3	—	—	—	—	7.3	8.8	—	—	—	—	6.0
Blaney B401 (2X)	23.3	—	—	125.7	100.4	—	—	—	—	1.6	4.0	—	—	—	—	6.0
Weather Master EP35 (3X)	23.4	25	—	130.8	94.3	138	88	—	—	11.8	10.6	7	15	—	—	5.5
Jacques JX952 (2X)	23.5	22	24	109.8	86.9	112	89	110	90	18.3	14.7	10	13	7	9	5.8
Pride R200A (2X)	23.5	—	—	146.8	100.9	—	—	—	—	6.2	8.1	—	—	—	—	6.0
Michigan 380-3X (3X)	23.5	—	—	139.2	102.1	—	—	—	—	8.7	6.5	—	—	—	—	5.3
Weather Master EXP2P (2X)	23.6	23	—	104.5	79.9	126	80	—	—	14.8	13.5	9	14	—	—	6.0
Super Crost 163	23.6	25	26	135.3	95.1	138	96	140	95	2.4	6.4	2	8	1	5	6.0
1Pioneer 3909 (2X)	23.8	—	—	158.1	100.7	—	—	—	—	2.3	4.8	—	—	—	—	2.5
Cowbell 102SX (2X)	23.9	—	—	146.0	108.0	—	—	—	—	3.2	5.8	—	—	—	—	5.8
Michigan 400	23.9	25	26	137.5	101.7	149	99	147	98	0.8	3.1	2	6	2	7	5.0
1-2Mich. Exp. 67-780 (3X)	24.0	—	—	165.0	120.9	—	—	—	—	1.4	0.8	—	—	—	—	3.3
Pioneer 3911 (2X)	24.1	24	25	132.4	102.2	140	97	146	102	0.8	3.9	5	14	3	12	2.5
Michigan 402-2X (2X)	24.1	25	26	141.8	100.0	153	99	152	103	2.5	3.2	5	14	4	12	5.0
Jacques 951E	24.2	25	25	134.7	103.5	146	96	136	91	3.1	6.3	2	14	1	10	5.8
1-2Blaney 6616 (3X)	24.3	—	—	163.3	118.3	—	—	—	—	3.9	6.0	—	—	—	—	5.0
1-2Super Crost S19 (2X)	24.4	25	25	169.1	119.0	162	105	157	104	3.3	1.6	2	6	2	6	6.0
Weather Master EPX4A (2X)	24.4	—	—	109.1	71.7	—	—	—	—	16.1	14.7	—	—	—	—	5.8
DeKalb XL306 (3X)	24.5	26	—	133.7	90.7	144	83	—	—	9.0	9.8	5	17	—	—	5.5
Teweles SXT61 (3X)	24.6	26	27	146.6	94.0	150	94	150	98	2.4	3.1	2	4	2	4	6.0
Weather Master EPX3P (2X)	24.7	25	26	132.0	97.4	138	98	131	93	7.8	9.1	4	12	3	9	5.5
Pioneer 3799 (3X)	24.8	—	—	130.0	98.3	—	—	—	—	8.0	7.7	—	—	—	—	4.0
Weather Master EP30 (3X)	25.0	25	26	112.5	92.1	132	83	120	77	16.6	14.0	9	17	6	13	5.5
1-2Funk Bros. G17A	25.2	26	26	154.6	116.9	160	103	156	102	6.2	6.0	6	9	4	8	5.0
DeKalb XL315 (3X)	25.2	26	27	128.3	96.6	129	85	133	83	3.9	4.7	4	11	3	8	6.0
1Funk Bros. G4287 (3X)	25.4	26	26	152.9	99.1	151	94	148	93	8.1	9.7	6	12	4	8	5.0
1-2Blaney 6905A (2X)	25.6	—	—	173.8	127.7	—	—	—	—	6.3	5.0	—	—	—	—	5.0
1-2Pride R290 (2X)	25.9	—	—	177.7	118.5	—	—	—	—	1.6	1.6	—	—	—	—	5.0
1-2Michigan 500-2X (2X)	25.9	27	28	167.6	126.7	171	111	174	113	1.6	1.6	2	8	1	7	5.0
Michigan 463-3X (3X)	25.9	27	27	129.9	97.0	142	96	146	99	11.8	7.4	7	13	6	10	5.0
1DeKalb XL24 (2X)	26.2	27	—	155.8	110.4	152	99	—	—	3.1	5.0	2	8	—	—	3.8
Funk Bros. G4222 (2X)	26.5	27	28	148.1	100.7	145	91	140	94	3.9	3.1	3	9	2	7	5.0
1Pioneer 3773 (2X)	26.7	27	28	167.6	110.5	176	106	165	110	3.1	2.3	2	9	2	6	5.0
1-2Michigan 555-3X (3X)	26.8	28	29	161.2	119.8	167	111	172	115	3.8	1.6	2	8	2	6	5.0
Michigan 568-3X (3X)	26.9	28	29	150.3	109.0	154	107	158	111	4.0	1.6	3	9	2	6	3.5
1DeKalb XL45 (2X)	28.0	29	30	157.0	106.1	162	95	161	98	5.6	7.0	4	10	3	6	5.0
Average	23.9	25	26	138.1	101.2	145	95	145	97	6.3	7.9	4	12	3	9	4.9
Range	18.6 to 28.0	19 to 29	22 to 30	94.9 to 177.1	69.6 to 127.7	96 to 180	71 to 118	110 to 174	72 to 115	0.8 to 18.3	0.8 to 24.4	1 to 10	4 to 21	1 to 8	4 to 15	2.5 to 6.0
Least significant difference	0.7	0.6	0.4	13.3	10.9	7	6	6	5							

1Significantly better than average yield, irrigated, 1970.

2Significantly better than average yield, not irrigated, 1970.

	1970	1969	1968
Planted	May 8	May 3	May 4
Harvested	Oct. 16	Oct. 31	Oct. 26
Soil type	Montcalm sandy loam	Montcalm sandy loam	Montcalm sandy loam
Previous crop	Sorghum-sudan seeded to rye in fall	Sorghum-sudan seeded to rye in fall	Sorghum-sudan seeded to rye in fall
Population	19,900	19,500	19,600
Rows	30"	30"	30"
Fertilizer	213-160-160	205-160-160	236-190-190
Soil test: pH	6.3	6.2	6.2
P	246 (very high)	242 (very high)	256 (very high)
K	255 (high)	237 (high)	220 (high)
Irrigation:	5.5"	6.0"	7.5"

Cooperator: Theron Comden, Lakeview

County Extension Director: James Crosby, Stanton

Table 17. **NORTH CENTRAL MICHIGAN** (Zone 3)
MASON-NEWAYGO COUNTY TRIAL

One and Two Year Averages —
Mason = 1970, Newaygo = 1968

Hybrid	Moisture %		Bushels per acre		Stalk lodging %		Blight rating
	1970	2 Year	1970	2 Year	1970	2 Year	
Michigan 200	18.9	—	86.1	—	3.7	—	5.5
Northrup King PX417 (3X)	19.6	21	82.3	78	4.1	3	6.0
Pride R118 (3X)	20.2	22	78.6	94	10.6	6	6.0
Northrup King PX20 (2X)	20.5	—	87.9	—	2.4	—	6.0
*Michigan 275-2X (2X)	20.5	21	104.5	109	6.0	3	6.0
Northrup King PX442 (Sp.)	20.6	22	88.0	88	5.9	3	6.0
Michigan 280	20.6	21	98.3	100	6.7	4	6.0
Northrup King PX428 (3X)	20.6	—	75.3	—	5.9	—	6.0
Funk Bros. G5150	20.7	—	85.3	—	5.9	—	6.0
Michigan 270	20.8	21	88.8	90	6.5	5	6.0
Northrup King PX446 (Sp.)	21.0	23	91.7	91	3.7	2	6.0
Pride 119	21.1	—	74.8	—	7.2	—	6.0
Funk Bros. G4175 (3X)	21.2	—	77.9	—	7.8	—	6.0
Pioneer 3854	21.4	24	84.0	82	7.2	4	6.0
Jacques JX952 (2X)	21.5	—	95.6	—	1.8	—	6.0
*Michigan 300	21.6	22	110.9	106	8.5	5	6.0
P.A.G. SX48 (2X)	21.6	23	99.8	98	8.3	5	6.0
*Michigan 250	21.6	22	105.4	99	5.1	4	5.5
Pioneer 3956 (2X)	21.6	23	96.2	103	11.1	6	6.0
Pioneer 3959 (3X)	21.9	—	92.1	—	8.5	—	6.0
Jacques JX992 A	22.2	—	97.9	—	8.2	—	5.8
Pioneer 3911 (2X)	22.2	24	80.4	105	7.2	4	4.0
*Bayless SX210 Q (2X)	22.3	—	106.2	—	7.5	—	6.0
Funk Bros. G4160 (3X)	22.4	—	75.4	—	7.2	—	6.0
Northrup King PX476 (3X)	22.4	—	92.7	—	4.8	—	5.3
Michigan 380-3X (3X)	22.4	—	98.7	—	3.1	—	6.0
Funk Bros. G4252 (3X)	22.8	—	93.8	—	3.0	—	5.5
*Pride R200A (2X)	22.9	—	105.5	—	4.1	—	6.0
DeKalb EX14 (2X)	23.1	—	98.0	—	3.0	—	5.3
Funk Bros. G4287 (3X)	23.1	25	94.0	101	6.2	4	6.0
Wolverine 46A	23.2	—	88.5	—	1.2	—	6.0
Cowbell 102 SX (2X)	23.4	25	97.5	113	1.8	2	5.0
*Mich. Exp. 67-780 (3X)	23.4	—	116.7	—	2.5	—	3.5
Teweles SXT61 (3X)	23.5	—	98.7	—	4.9	—	6.0
Cowbell 300-3X (3X)	23.7	—	101.8	—	1.2	—	5.3
Wolverine 39	23.8	—	86.2	—	6.1	—	6.0
DeKalb XL306 (3X)	24.1	25	92.3	96	5.4	3	6.0
P.A.G. SX76 (2X)	24.5	—	90.6	—	3.7	—	2.8
Michigan 400	24.5	25	99.5	105	5.7	3	6.0
*Michigan 402-2X (2X)	24.7	25	111.0	116	3.7	3	4.8
*Pioneer 3909 (2X)	24.9	—	112.9	—	1.8	—	2.5
DeKalb XL15A (2X)	25.8	—	98.9	—	6.9	—	4.0
Northrup King PX525 (Sp.)	26.0	28	103.7	117	4.2	3	5.0
*Pioneer 3773 (2X)	26.6	28	109.0	122	3.0	2	5.0
Average	22.2	24	93.5	100	5.2	4	5.3
Range	18.9	21	74.8	78	1.2	2	2.5
	26.6	28	116.7	122	11.1	6	6.0
Least significant difference	0.9	0.7	10.7	6			

*Significantly better than average yield in 1970. 1969 trial in Newaygo County was not harvested. It was damaged by excessive water.

	1970	1968
Planted	April 29	May 10
Harvested	Oct. 15	Oct. 29
Soil type	Nester loam	Silkirk loam
Previous crop	Corn	Corn
Population	19,600	18,800
Rows	30"	30"
Fertilizer	122-48-117	18-72-36
Soil test: pH	5.9	7.2
P	41 (high)	28 (medium)
K	191 (high)	179 (high)

Farm Cooperators: 1970 = William Courtland, Scottville;
1968 = Ivan Norris, Hesperia

County Extension Directors: 1970 = Dean Raven, Scottville;
1968 = Lane Rushmore, Fremont

Table 18. **NORTHERN MICHIGAN** (Zone 4)
GRAND TRAVERSE COUNTY TRIAL

One, Two, and Three Year Averages —
1969, 1968, 1967
1970 Trial Abandoned due to drouth

Hybrid	Moisture %			Bushels per acre			Stalk lodging (%)			Root lodging
	1969	2 Yrs.	3 Yrs.	1969	2 Yrs.	3 Yrs.	1969	2 Yrs.	3 Yrs.	
Northrup King PX417 (3X)	30.9	26	—	76.8	53	—	6.2	25	—	0.0
Michigan	31.0	27	27	103.4	85	81	4.0	3	6	2.0
A.E.S. 202	31.1	27	27	86.3	74	71	7.7	12	8	0.0
Northrup King PX428 (3X)	31.4	—	—	86.0	—	—	2.5	—	—	0.6
Funk Bros. G43	32.7	28	—	80.7	55	—	5.6	25	—	0.0
Northrup King PX442 (Sp.)	33.3	28	—	102.4	65	—	0.6	9	—	0.0
*Michigan 280	33.7	27	28	114.2	81	78	7.8	15	11	4.5
*Michigan 275-2X (2X)	34.3	28	—	118.3	81	—	4.1	23	—	0.0
Michigan 270	34.4	27	28	86.3	60	62	4.4	21	14	0.0
DeKalb XL301 (3X)	34.6	—	—	92.2	—	—	3.9	—	—	6.5
Michigan 250	34.6	28	28	95.5	69	68	2.7	17	12	0.7
Pride R118 (3X)	34.6	29	—	92.5	63	—	1.3	36	—	6.4
Funk Bros. G4160 (3X)	34.9	—	—	72.5	—	—	4.3	—	—	0.0
*Michigan 300	35.4	29	30	114.8	78	—	4.0	16	11	6.7
Pride R129 (3X)	36.5	30	—	83.8	60	—	4.7	34	—	1.2
Northrup King KE435	36.7	31	31	74.1	69	65	11.3	27	20	0.0
DeKalb 45	38.2	32	31	76.7	76	72	1.9	5	3	0.0
DeKalb XL304 (3X)	38.4	—	—	90.8	—	—	2.4	—	—	0.6
Funk Bros. G4287 (3X)	38.7	32	—	101.1	67	—	1.2	15	—	0.0
*Pioneer 3956 (2X)	38.7	30	30	110.3	69	72	5.3	16	11	0.0
Northrup King KE497	39.3	33	34	91.4	58	57	1.9	9	6	3.8
Weather Master EPX-1P (2X)	39.5	—	—	95.8	—	—	4.8	—	—	0.0
Northrup King PX480 (Sp.)	39.6	—	—	98.5	—	—	0.6	—	—	1.2
Northrup King PX446 (Sp.)	39.7	32	31	101.7	76	72	1.2	28	19	0.0
Average	35.5	29	29	93.7	73	72	4.0	17	10	1.3
Range	30.9	26	27	72.5	52	57	0.0	1	1	0.0
	39.7	33	34	118.3	107	91	11.3	36	20	6.7
Least significant difference	1.2	0.8	0.6	10.2	5	4				

Significantly better than average yield in 1969

	1969	1968	1967
Planted	May 16	May 13	May 23
Harvested	Nov. 6	Nov. 4	Oct. 25
Soil Type	Emmett sandy loam	Emmett sandy loam	Emmett sandy loam
Previous crop	Corn	Corn	Corn
Population	18,400	17,800	18,000
Rows	38"	38"	38"
Fertilizer	190-90-210	149-82-162	81-81-81
Soil test: pH	6.6	6.2	5.9
P	28 (medium)	67 (high)	62 (high)
K	81 (low)	139 (medium)	171 (medium)

Farm Cooperator: Karl Wagner, Grawn

County Extension Director: George McManus, Traverse City

Table 19. **NORTHERN MICHIGAN** (Zone 4)
GRAIN — ALPENA COUNTY TRIAL

One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture			Bushels per acre			% Stalk lodging		
	1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.	1970	2 Yrs.	3 Yrs.
Pioneer 3873	25.8	—	—	100.9	—	—	14.5	—	—
*Michigan 200	25.9	31	30	113.2	113	119	8.6	9	6
*A.E.S. 202	26.3	31	30	116.7	112	116	9.2	7	5
Funk Bros. G4160 (3X)	26.8	33	—	89.8	90	—	15.6	12	—
Jacques 854J	27.5	—	—	86.6	—	—	16.1	—	—
Jacques 951E	28.1	—	—	100.0	—	—	10.7	—	—
*Michigan 250	28.3	34	35	124.9	111	116	10.3	8	5
*Michigan 270	28.4	33	34	120.7	111	116	7.6	7	5
*Michigan 280	29.8	35	36	124.5	131	134	11.1	8	5
Weather Master CD2	30.0	—	—	75.8	—	—	13.5	—	—
Pioneer 3889	30.8	—	—	83.4	—	—	17.2	—	—
*Michigan 275-2X (2X)	31.3	35	—	116.6	127	—	12.7	7	—
Weather Master EPXO (2X)	31.5	—	—	97.4	—	—	12.9	—	—
Northrup King X71343 (3X)	32.7	—	—	80.6	—	—	10.6	—	—
Pride R118 (3X)	32.9	36	—	73.8	98	—	17.4	12	—
Seneca XX155	33.4	36	35	108.7	116	117	13.4	8	6
*DeKalb XL301 (3X)	33.4	38	37	96.9	95	96	11.4	6	4
*DeKalb 22	33.6	—	—	113.5	—	—	10.9	—	—
Northrup King PX417 (3X)	33.9	34	33	94.5	95	99	17.1	12	8
DeKalb XT138	35.0	38	37	90.0	99	104	13.1	7	5
Northrup King PX442 (Sp.)	35.9	39	38	97.5	114	116	12.1	6	4
Trojan TX68	37.3	35	32	92.3	67	70	8.7	19	13
Renk NR1 (2X)	38.0	—	—	81.9	—	—	12.9	—	—
Northrup King PX446 (Sp.)	38.3	41	39	97.9	109	119	8.4	5	4
Pride 137	39.0	41	39	101.1	113	121	5.7	7	5
Michigan 300	39.1	41	—	95.6	110	—	10.5	7	—
Northrup King PX428 (3X)	39.6	38	—	107.9	110	—	14.0	12	—
Funk Bros. G43	39.8	39	37	107.2	105	111	12.8	15	10
Pioneer 3956 (2X)	42.1	43	41	102.1	108	119	13.4	7	5
Seneca XX150	42.3	40	—	93.4	100	—	16.5	13	—
Average	33.2	37	36	99.6	107	113	12.2	9	6
Range	25.8	31	30	73.8	67	70	5.7	5	4
	42.3	43	41	124.9	131	134	17.4	19	13
Least significant difference	1.3	1.0	0.7	9.7	6	4			

*Significantly better than average yield in 1970.

	1970	1969	1968
Planted	May 12	May 27	May 21
Harvested	Sept. 18	Sept. 16	Sept. 18
Soil type	Onaway loam	Onaway loam	Onaway loam
Previous crop	Corn	Corn	Wheat
Rows	28"	28"	28"
Population	19,700	19,200	21,100
Fertilizer	121-84-84	200-80-136	120-72-72

Farm Cooperator: William Bartow, Alpena
County Extension Director: A. H. Nickels, Alpena

Table 20. **NORTHERN MICHIGAN** (Zone 4)
SILAGE — ALPENA COUNTY TRIAL

One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture in ears			Tons per acre						% Ears in dry weight		
	1970	2 Yrs.	3 Yrs.	Green weight			Dry weight			1970	2 Yrs.	3 Yrs.
Trojan TX68	37.5	43	43	14.3	13.9	15.0	4.6	5.0	5.2	65.5	56	55
Weather Master CD2	39.7	—	—	10.1	—	—	3.7	—	—	66.1	—	—
A.E.S. 202	40.3	47	47	20.2	22.6	24.5	6.1	6.7	7.2	65.0	55	53
Michigan 200	41.4	48	48	21.0	22.3	24.4	6.3	6.5	7.3	62.9	54	53
Northrup King PX428 (3X)	42.0	48	—	15.2	18.1	—	4.9	5.9	—	63.2	55	—
Northrup King X71343 (3X)	42.8	—	—	20.1	—	—	5.9	—	—	63.1	—	—
Northrup King PX417 (3X)	43.0	49	50	17.4	18.8	20.8	6.0	6.2	6.7	61.5	51	51
Renk NR1 (2X)	43.4	—	—	12.7	—	—	3.5	—	—	64.7	—	—
Weather Master EPXO (2X)	43.6	—	—	23.1	—	—	6.3	—	—	61.9	—	—
Pride R118 (3X)	44.8	51	—	19.4	24.1	—	6.3	7.1	—	62.5	54	—
Funk Bros. G4160 (3X)	45.5	50	—	18.6	20.0	—	5.0	5.9	—	62.5	55	—
DeKalb XT138	45.5	52	53	19.0	22.7	25.6	5.4	6.4	6.9	59.9	48	46
Michigan 280	45.8	53	54	27.5	28.3	30.8	7.2	7.5	8.0	58.3	48	49
DeKalb 22	45.8	—	—	20.2	—	—	5.3	—	—	63.2	—	—
Michigan 270	46.0	51	52	23.9	24.3	25.7	6.2	6.4	6.9	57.7	48	48
DeKalb XL301 (3X)	47.6	54	55	22.0	22.5	24.5	6.0	6.2	6.5	59.2	48	47
Pioneer 3873	47.9	—	—	24.1	—	—	6.6	—	—	58.9	—	—
Northrup King PX446 (Sp.)	47.9	53	55	27.7	27.9	30.4	7.6	7.6	8.1	54.8	46	44
Jacques 854J	48.1	—	—	24.0	—	—	6.0	—	—	58.4	—	—
Michigan 250	48.5	54	54	24.7	25.8	28.3	6.4	6.7	7.4	58.4	48	46
Jacques 951E	49.1	—	—	25.8	—	—	6.5	—	—	60.4	—	—
Pride 137	49.1	55	55	24.7	26.7	28.4	6.5	7.2	7.7	59.5	49	48
Pioneer 3889	49.4	—	—	18.0	—	—	4.9	—	—	61.0	—	—
Pioneer 3956 (2X)	49.4	58	58	23.3	25.8	28.6	6.3	6.9	7.7	58.5	45	44
Michigan 275-2X (2X)	49.5	55	—	25.3	26.6	—	6.5	7.0	—	58.6	52	—
Northrup King PX442 (Sp.)	50.0	55	56	23.5	26.1	27.4	6.1	6.9	7.3	57.2	51	56
Funk Bros. G43	50.4	52	54	28.2	25.8	27.2	6.6	6.9	7.1	55.9	50	54
Seneca XX150	50.9	52	—	18.0	20.4	—	4.8	5.6	—	61.8	54	—
Seneca XX155	51.4	54	53	24.8	25.5	26.0	6.2	6.6	7.1	58.5	52	48
Michigan 300	51.6	57	—	28.5	29.7	—	6.9	7.3	—	52.1	46	—
Average	46.2	52	53	21.6	23.8	26.1	5.8	6.6	7.2	60.4	50	49
Range	37.5	43	43	10.1	13.9	15.0	3.5	5.0	5.2	52.1	45	44
	51.6	58	58	28.5	29.7	30.8	7.6	7.6	8.1	66.1	56	55
Least significant difference	1.6	1.2	1.0	1.4	0.9	0.6	0.5	.4	.3	3.2	2	2

	1970	1969	1968
Planted	May 12	May 27	May 21
Harvested	Sept. 18	Sept. 16	Sept. 18
Soil type	Onaway loam	Onaway loam	Onaway loam
Previous crop	Corn	Corn	Wheat
Rows	28"	28"	28"
Population	19,700	19,200	21,100
Fertilizer	121-84-84	200-80-136	120-72-72

Farm Cooperator: William Bartow, Alpena
County Extension Director: A. H. Nickels, Alpena

Table 21. **NORTHERN MICHIGAN** (Zone 4)
SILAGE — ALGER COUNTY TRIAL

One, Two, and Three Year Averages —
1970, 1969, 1968

Hybrid	% Moisture in ears			Tons per acre						% Ears in dry weight		
				Green weight			Dry weight					
	1970	2	3	1970	2	3	1970	2	3	1970	2	3
	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.	Yrs.
Trojan TX68	37.6	43	55	7.9	8.2	9.5	3.8	3.3	3.2	55.3	54	43
Wisconsin 240	39.7	—	—	10.2	—	—	4.0	—	—	48.0	—	—
Wisconsin 233	42.5	—	—	11.9	—	—	4.6	—	—	52.3	—	—
Northrup King X71343 (3X)	43.3	—	—	12.6	—	—	5.1	—	—	54.1	—	—
DeKalb 29	44.4	48	59	12.0	14.1	16.6	4.6	4.5	4.4	43.9	45	37
Weather Master CD2	44.7	48	—	8.7	9.7	—	3.9	3.7	—	56.3	51	—
Northrup King PX417 (3X)	44.8	52	60	8.8	11.9	13.9	3.8	4.0	3.8	51.8	47	39
Wisconsin 243	44.8	50	60	9.9	12.4	14.7	3.7	3.8	3.6	55.0	48	38
Wisconsin 253	44.9	—	—	11.6	—	—	4.2	—	—	48.5	—	—
Wisconsin 255	44.9	—	—	7.8	—	—	2.9	—	—	50.8	—	—
Midland M385 (3X)	45.0	—	—	9.2	—	—	3.4	—	—	52.6	—	—
Northrup King PX428 (3X)	45.7	51	—	10.9	13	—	4.5	4.4	—	54.1	50	—
DeKalb 22	46.1	—	—	11.2	—	—	4.3	—	—	42.5	—	—
A.E.S. 202	46.2	51	60	11.6	13.3	15.7	4.8	4.5	4.1	51.1	47	40
Northrup King KC3	47.0	51	61	10.3	12.9	15.0	4.0	4.2	3.9	59.5	51	41
Northrup King PX442 (Sp.)	47.3	55	63	14.8	15.2	18.0	5.3	4.6	4.3	47.9	42	35
Funk Bros. G4082 (3X)	47.5	—	—	10.3	—	—	3.9	—	—	45.4	—	—
Teweles 201	48.9	55	63	12.0	14.7	17.2	4.5	4.5	4.3	48.0	44	36
Michigan 275-2X (2X)	49.2	57	—	11.3	14.9	—	4.4	4.6	—	48.2	42	—
Michigan 200	49.3	53	61	13.6	14.8	16.6	4.7	4.4	4.2	47.6	46	40
Pioneer 3873	49.4	—	—	13.0	—	—	5.0	—	—	47.8	—	—
Michigan 270	51.0	57	64	11.9	14.6	16.2	4.1	4.2	3.7	43.1	39	33
Midland M480	51.1	57	64	15.1	17.7	18.4	4.9	4.9	4.4	47.3	40	34
Pioneer 3956 (2X)	51.1	59	66	12.6	15.9	18.4	4.8	4.8	4.3	51.1	42	36
Midland M490	51.1	56	64	16.4	16.6	18.7	5.3	4.7	4.4	45.0	42	34
Michigan 280	51.5	59	66	15.1	17.4	20.0	5.1	4.9	4.5	45.3	40	34
Michigan 250	53.0	58	65	17.7	18.2	19.2	5.8	5.1	4.4	39.0	38	30
Michigan 300	54.9	62	—	16.8	18.9	—	5.6	5.2	—	41.3	35	—
Northrup King PX446 (Sp.)	54.9	62	68	13.7	15.3	17.9	4.8	4.4	4.0	44.2	37	31
Average	47.4	54	62	12.3	14.4	16.6	4.5	4.4	4.1	48.9	44	36
Range	37.6	43	55	7.8	8.2	9.5	2.9	3.3	3.2	39.0	35	30
	to	to	to	to	to	to	to	to	to	to	to	to
	54.9	62	68	17.7	18.9	20.0	5.8	5.2	4.5	59.5	54	43
Least significant difference	1.8	1.3	1.1	1.2	0.8	0.6	.5	.4	.3	3.0	2	2

	1970	1969	1968
Planted	May 21	May 22-23	June 13
Harvested	Sept. 30 - Oct. 8	Sept. 24-26	Sept. 27
Soil type	Chatham stoney loam	Chatham stoney loam	Chatham stoney loam
Previous crop	Corn	Corn	Corn
Rows	36"	36"	36"
Population	17,200	16,700	16,900
Fertilizer	118-72-72	26-77-77	78-72-72
Soil test: ph		7.5	
P		82 (high)	
K		135 (medium)	

Cooperator: Dr. Don Reid, Michigan State University, Chatham

Table 22. Index for 267 hybrids entered as 1,067 entries in the 1970 Michigan Corn Performance Trials. Numbers within parentheses refer to table numbers in which the hybrid appears; (2X) indicates a single-cross hybrid, (3X) indicates a three-way hybrid, (Sp) indicates a special-cross hybrid, and all others are double cross hybrids.

ACCO Seed, 515 River North, Belmont, Iowa	Super Crost 233 (3X) (1, 2, 5, 8, 9, 10, 14, 15)	Michigan Hybrid Seed Co., 974 Rosewood Ave., East Lansing, Mich.	Roy W. Parker & Sons, Inc., Kimmell, Ind.
Acco U 353 (3X) (5)	Merrill Eady, Funk Bros. Seed Co., Grant, Mich.	Wolverine 25 (14, 15)	Parker 233 (3X) (5)
Acco TGG 440 (1, 3)	Funk Bros. G 17A (16, 19, 20)	Wolverine 39 (17)	Parker 260 (3X) (3, 5, 6)
Acco UC 1900 (2X) (3, 7, 8, 9, 10)	Funk Bros. G 43 (18)	Wolverine 46A (14, 15, 17)	Parker 300 (2X) (3, 5)
Acco UC 2300 (2X) (7, 8, 9, 10)	Funk Bros. G 4082 (3X) (21)	Wolverine 59 (13)	Parker 333 (3X) (3, 5)
Acco UC 2600 (2X) (3)	Funk Bros. G 4160 (2X) (17, 18, 19, 20)	Wolverine 65 (13)	Parker 360 (2X) (6)
Acco UC 3300 (2X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)	Funk Bros. G 4175 (3X) (12, 14, 15, 16, 17)	Wolverine W130 (2X) (13)	P.A.G. Division, W. R. Grace and Co., Aurora, Ill.
Acco UC 3600 (2X) (1, 3, 4, 5, 6)	Funk Bros. G 4222 (2X) (7, 8, 9, 10, 13, 16)	Wolverine W170 (2X) (1, 8, 9, 10, 13)	P.A.G. SX7 (2X) (3)
Acco UC 4400 (2X) (1)	Funk Bros. G 4240 (2X) (8, 9, 10, 12)	Wolverine W175 (2X) (1, 2, 8, 9, 10)	P.A.G. SX9 (2X) (1)
Acco UC 4500 (2X) (5)	Funk Bros. G 4252 (3X) (4, 7, 8, 9, 10, 13, 14, 15, 17)	Wolverine W176 (2X) (1, 2, 8, 9, 10)	P.A.G. 27 (3X) (12)
Acco UC 5200 (2X) (5)	Funk Bros. G 4287 (3X) (6, 7, 8, 9, 10, 12, 16, 17, 18)	Midland Co-op, Powers, Mich.	P.A.G. SX33 (2X) (3)
Asgrow Seed Co., Box 407, Oxford, Ind.	Funk Bros. G 4333 (2X) (3, 4, 13)	Midland M340 (3X) (21)	P.A.G. 34 (3X) (12)
Asgrow 1LX4 (2X) (12)	Funk Bros. G 4360 (6)	Midland M485 (21)	P.A.G. 45 (3)
Asgrow 6G5 (2X) (12)	Funk Bros. G 4384 (2X) (1, 2, 3, 5, 6)	Midland M490 (21)	P.A.G. SX48 (2X) (3, 12, 14, 15, 17)
Asgrow ATC 35A (3X) (12)	Funk Bros. G 4444 (2X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13)	Midwest Research Associates, Dassel, Minn.	P.A.G. SX52 (2X) (4, 8, 9, 10)
Asgrow ASC43 (2X) (12)	Funk Bros. G 5150 (17)	Weather Master CD2 (19, 20, 21)	P.A.G. SX76 (2X) (17)
Asgrow ASC58 (2X) (13)	Funk Bros. G 5207 (1, 2, 3, 4, 6)	Weather Master EPX0 (2X) (19, 20)	P.A.G. 272 (3X) (3)
Asgrow SX108 (2X) (12)	Garno Seed Co., Deerfield, Mich.	Weather Master EPX1P (2X) (18)	Pioneer Corn Co., Inc., 221 N. Main St., Tipton, Ind.
Bayless Hybrids, Route 1, Bluffton, Ind.	Garno S 90 (2X) (13)	Weather Master EPX2P (2X) (13, 16)	Pioneer 354A (1)
Bayless SX210Q (2X) (1, 6, 13, 17)	Garno S 92 (2X) (1, 13)	Weather Master EPX3P (2X) (13, 16)	Pioneer 371 (4, 7, 13)
Bayless SX415 (2X) (3)	Garno S 96 (2X) (1, 13)	Weather Master EPX4P (2X) (5, 6, 13, 16)	Pioneer 369 (2, 3)
Bayless SX433-8Q (2X) (1, 2)	Fred Gutwein & Sons, Inc., Francesville, Ind.	Weather Master EPX4A (2X) (5, 6, 16)	Pioneer 3414 (3)
Bayless SX434 (2X) (1, 2, 3, 4, 5, 6)	Gutwein 10 (2X) (3, 6)	Weather Master EPX5P (2X) (1)	Pioneer 3466 (3)
Bayless SX485 (3X) (1, 2, 3)	Gutwein 17 (3X) (3)	Weather Master EP55 (3X) (1)	Pioneer 3505 (5)
Bayless SX601 (2X) (3)	Gutwein 20 (2X) (1, 2, 3, 6)	Weather Master EPX6A (2X) (1)	Pioneer 3516 (5, 6)
Bayless SX615-5 (2X) (2, 6)	Gutwein 21 (2X) (1, 2, 6)	Migro Hybrids, Box 7, Mitchell, Ind.	Pioneer 3561 (2X) (6, 7, 8, 9, 10, 13)
Blaney Farms, Inc., Route 4, Madison, Wis.	G. E. Hulting & Son, Geneseo, Ill.	Migro M-12 (2X) (1, 2, 3, 4, 5, 6, 8, 9, 10, 11)	Pioneer 3567 (2X) (5)
Blaney B-AA (2X) (1, 2, 5, 6, 7, 8, 9, 10, 13)	Hulting X245 (3)	Migro M-22A (2X) (1, 2, 3, 4, 5, 6)	Pioneer 3570 (2X) (1, 5)
Blaney B401 (2X) (1, 2, 5, 6, 7, 8, 9, 10, 13, 16)	Hulting X537 (2X) (2, 3, 4)	Migro M-110A (5, 6)	Pioneer 3571 (Sp.) (1, 2, 3, 4, 5, 6)
Blaney B601 (2X) (1, 2, 5, 6, 7, 8, 9, 10, 13)	Hulting X770 (2X) (2, 3, 4)	Migro M-540 (1, 2, 3, 4, 5, 6, 8, 9, 10, 14, 15)	Pioneer 3579 (2X) (7, 8, 9, 10, 13)
Blaney BA880 (3X) (1)	Hulting X928 (2, 3)	Migro M-1010 SX (2X) (1, 2, 3, 4, 5, 6, 8, 9, 10, 14, 15)	Pioneer 3658 (2)
Blaney 6606A (2X) (1, 8, 9, 10, 13)	Hulting X9761 (3)	Migro MHL-22 SX (2X) (11)	Pioneer 3715 (3X) (1, 3, 7)
Blaney 6616 (3X) (1, 2, 5, 6, 7, 8, 9, 10, 13, 16)	Hulting X9770 (3)	Migro MHL-33 SX (2X) (11)	Pioneer 3773 (2X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17)
Blaney 6905A (2X) (1, 2, 5, 6, 7, 8, 9, 10, 13, 16)	Jacques Seed Co., Prescott, Wis.	Moews Seed Co., P.O. Box 277, Granville, Ill.	Pioneer 3775 (2X) (1, 4, 8, 9, 10, 13)
Bo-Jac Hybrid Corn Co., Route 2, Mt. Pulaski, Ill.	Jacques JX162 (2X) (8, 9, 10, 12, 13, 14, 15)	Moews SM220 (2X) (5, 8, 9, 10)	Pioneer 3799 (3X) (12, 16)
Bo-Jac X2E (2X) (1, 2, 4, 5, 8, 9, 10)	Jacques 854J (19, 20)	Moews SM229 (2X) (5, 8, 9, 10)	Pioneer 3854 (17)
Bo-Jac X13 (3X) (1, 5, 8, 9, 10)	Jacques JX863 (3X) (14, 15)	Moews SM327 (2X) (5)	Pioneer 3873 (19, 20, 21)
Cargill, Inc., Minneapolis, Minn.	Jacques 905E (12, 14, 15)	Moews SM337 (3X) (5, 6)	Pioneer 3889 (19, 20)
Cargill 566 (8, 9, 10)	Jacques 951E (16, 19, 20)	Northrup, King & Co., 1500 Jackson St., N.E., Minneapolis, Minn.	Pioneer 3909 (2X) (12, 13, 14, 15, 16, 17)
Cargill 590 (8, 9, 10)	Jacques JX952 (2X) (13, 14, 15, 16, 17)	Northrup, King KC3 (21)	Pioneer 3911 (2X) (12, 13, 16, 17)
Cargill 666 (8, 9, 10)	Jacques JX962 (2X) (13)	Northrup, King PX20 (2X) (7, 8, 9, 10, 12, 13, 14, 15, 16, 17)	Pioneer 3956 (2X) (5, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21)
Cowbell Seeds, Inc., Wayland, Mich.	Jacques JX992A (17)	Northrup, King PX47 (2X) (2, 5, 6)	Pioneer 3959 (3X) (12, 17)
Cowbell HK 23 (6)	Jacques JX1052E (14, 15)	Northrup, King PX50 (2X) (1, 2, 3, 4, 5, 6, 11)	Prairie Stream Farms, Inc., Rt. 3, Frankfort, Ind.
Cowbell 102SX (2X) (7, 16, 17)	Lowe Seed Co., 217 South West Ave., P.O. Box 664, Kankakee, Ill.	Northrup, King PX417 (3X) (12, 13, 14, 15, 16, 17, 18, 19, 20, 21)	SX1B Golden Cross (2X) (4, 5, 6)
Cowbell 112SX (2X) (2, 3, 4, 8, 9, 10)	Lowe GG2A (Sp.) (3)	Northrup, King PX428 (3X) (12, 13, 14, 15, 16, 17, 18, 19, 20, 21)	Pride Seed Inc., P.O. Box 1088, Chatham, Ontario
Cowbell 206SX (2X) (8, 9, 10)	Lowe SX2TP (2X) (2, 3, 4)	Northrup, King KE435 (18)	Pride R118 (3X) (17, 18, 19, 20)
Cowbell 300 (3X) (3, 4, 7, 8, 9, 10, 17)	Lowe TWX2 (3X) (3)	Northrup, King PX442 (Sp.) (12, 13, 14, 15, 16, 17, 18, 19, 20, 21)	Pride 119 (17)
Cowbell 307 (3X) (4, 8, 9, 10)	Lowe XR 303 (2)	Northrup, King PX446 (Sp.) (12, 13, 14, 15, 16, 17, 18, 19, 20, 21)	Pride 137 (19, 20)
Crow's Hybrid Corn Co., Milford, Ill.	Michigan Crop Improvement Association, East Lansing, Mich.	Northrup, King PX476 (3X) (7, 8, 9, 10, 12, 13, 14, 15, 16, 17)	Pride R129 (3X) (18)
Crow's 196 (2X) (7)	Michigan 200 (14, 15, 16, 17, 18, 19, 20, 21)	Northrup, King KE497 (3, 13, 14, 15, 18)	Pride R200A (2X) (13, 14, 15, 16, 17)
Crow's 216 (2X) (7)	A.E.S. 202 (18, 19, 20, 21)	Northrup, King PX519 (Sp.) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13)	Pride R290 (2X) (12, 13, 14, 15, 16)
Crow's 226 (2X) (7)	Michigan 250 (6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21)	Northrup, King PX525 (Sp.) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 17)	Pride R407 (2X) (2, 3, 4, 5, 7, 8, 9, 10, 12)
Crow's 251 (2X) (7)	Michigan 275-2X (2X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21)	Northrup, King PX545 (3X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)	Pride R450 (2X) (1, 2, 3, 7, 8, 9, 10)
DeKalb Agricultural Assoc., Inc., DeKalb, Ill.	Michigan 280 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21)	Northrup, King PX556 (3X) (1, 2, 3, 4, 5, 6)	Pride R539 (3X) (2, 3)
DeKalb XL12 (2X) (12)	Michigan 300 (6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21)	Northrup, King PX580 (3X) (1, 2, 3, 4, 5, 6)	Renk Seed Co., Rt. 2, Sun Prairie, Wis.
DeKalb EX14 (12, 17)	Michigan 380-3X (3X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17)	Northrup, King PX610 (3X) (1, 2, 3, 4, 5, 6)	Renk NR1 (19, 20)
DeKalb XL15A (2X) (6, 14, 15, 17)	Michigan 400 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17)	Northrup, King X 71343 (3X) (19, 20, 21)	Renk RK 44 (2X) (1, 3, 4, 5)
DeKalb 22 (19, 20, 21)	Michigan 402-2X (2X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17)	Northrup, King Sp 53 (11)	Robson Seed Co., Hall, N. Y.
DeKalb XL23 (2X) (6, 7, 8, 9, 10, 13)	Michigan 463-3X (3X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16)	Northrup, King O 6622 (11)	Seneca XX150 (19, 20)
DeKalb XL24 (2X) (2, 6, 7, 8, 9, 10, 13, 16)	Michigan 500-2X (2X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16)	Northrup, King PX480 (Sp.) (14, 15, 18)	Seneca XX155 (19, 20)
DeKalb 29 (21)	Michigan 510-2X HL (2X) (11)	Occidental Chemical Co., P.O. Box 132, Applegate, Mich.	Teweles Seed Co., Milwaukee, Wis.
DeKalb 45 (18)	Michigan Exp. 67-780 (3X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17)	Oxy 16 (12)	Teweles SXT61 (3X) (16, 17)
DeKalb XL45 (2X) (1, 2, 3, 4, 6, 7, 8, 9, 10, 13, 16)	Michigan 555-3X (3X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16)	Oxy 22 (12)	Teweles 201 (21)
DeKalb XL45A (2X) (7, 8, 9, 10)	Michigan 568-3X (3X) (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16)	Oxy SX 352 (2X) (12, 14, 15)	Teweles 232 (14, 15)
DeKalb XT138 (19, 20)	OYO Seed Associates, Inc., Marysville, Ohio	Oxy SX 362 (2X) (12, 14, 15)	Todd Hybrid Corn Co., Burlington, Ind.
DeKalb XL301 (3X) (18, 19, 20)	OYO 145 (3X) (1, 2, 6)	Oxy SX 420 (2X) (12, 14, 15)	Todd M25 (2X) (2, 5)
DeKalb XL304 (3X) (12, 16, 18)	OYO 210 (2X) (1, 2, 6)	Oxy SX 477 (2X) (12, 14, 15)	Todd M30 (2X) (2, 5)
DeKalb XL306 (3X) (3, 4, 6, 7, 8, 9, 10, 13, 16, 17)	OYO 333 (2X) (1, 2, 6, 8, 9, 10)	OYO Seed Associates, Inc., Marysville, Ohio	Todd M55 (2X) (2, 5)
DeKalb XL315 (3X) (7, 8, 9, 10, 12, 14, 15, 16)	OYO 360 (3X) (8, 9, 10)	OYO Seed Associates, Inc., Marysville, Ohio	Trojan Seed Co., Olivia, Minn.
DeKalb XL325 (3X) (2, 7, 8, 9, 10, 14, 15)	University of Wisconsin, Madison, Wis.	Occidental Chemical Co., P.O. Box 132, Applegate, Mich.	Trojan TX68 (19, 20, 21)
DeKalb XL346 (3X) (1)	Wisconsin 233 (21)	Oxy 16 (12)	Trojan TX S102 (2X) (1, 2, 7, 8, 9, 10)
Edward J. Funk and Sons, Kentland, Ind.	Wisconsin 240 (21)	Oxy 22 (12)	Trojan TX S104 (2X) (2)
Super Crost S17 (2X) (13, 16)	Wisconsin 243 (21)	Oxy SX 352 (2X) (12, 14, 15)	Trojan TX S105 (2X) (1)
Super Crost S19 (2X) (5, 8, 9, 10, 13, 14, 15, 16)	Wisconsin 253 (21)	Oxy SX 362 (2X) (12, 14, 15)	Trojan TX S107 (2X) (1)
Super Crost S27 (2X) (1, 2, 5, 6, 8, 9, 10, 13, 14, 15)	Wisconsin 255 (21)	Oxy SX 420 (2X) (12, 14, 15)	Wyckoff Hybrids, Inc., Rt. 3, Valparaiso, Ind.
Super Crost S29 (2X) (1, 13)	Wyckoff Hybrids, Inc., Rt. 3, Valparaiso, Ind.	Oxy SX 477 (2X) (12, 14, 15)	Wyckoff WSX (3)
Super Crost 31A (14, 15)	Wyckoff W9X (2)	OYO Seed Associates, Inc., Marysville, Ohio	Wyckoff W10X (2, 3)
Super Crost 163 (3X) (13, 16)	Wyckoff W3X15 (3X) (2)	OYO 145 (3X) (1, 2, 6)	Wyckoff W3X15 (3X) (2)
Super Crost 223 (3X) (1)	Wyckoff W1212 (2X) (3)	OYO 210 (2X) (1, 2, 6)	Wyckoff W212 (2X) (3)
	Wyckoff W2412 (2X) (2, 3)	OYO 333 (2X) (1, 2, 6, 8, 9, 10)	
		OYO 360 (3X) (8, 9, 10)	