



# Michigan Corn Production

## HYBRIDS COMPARED 1969

COOPERATIVE EXTENSION  
MICHIGAN STATE UNIVERSITY

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HYBRID CORN TRIALS are conducted each year by the Michigan Experiment Station in cooperation with the Cooperative Extension Service, Michigan Crop Improvement Association, seed corn companies and farmers.

Many different hybrids are offered for sale in Michigan. They differ in yield ability, maturity, lodging resistance, and other characteristics. Choosing the best corn hybrids is an important part of profitable corn production. Higher yields and other improvements from planting the best hybrids are obtained with little or no increase in production costs. Seed of the best hybrids generally costs no more than seed of hybrids with lower performance.

### ENTRIES

Two groups of entries are included in the trials:

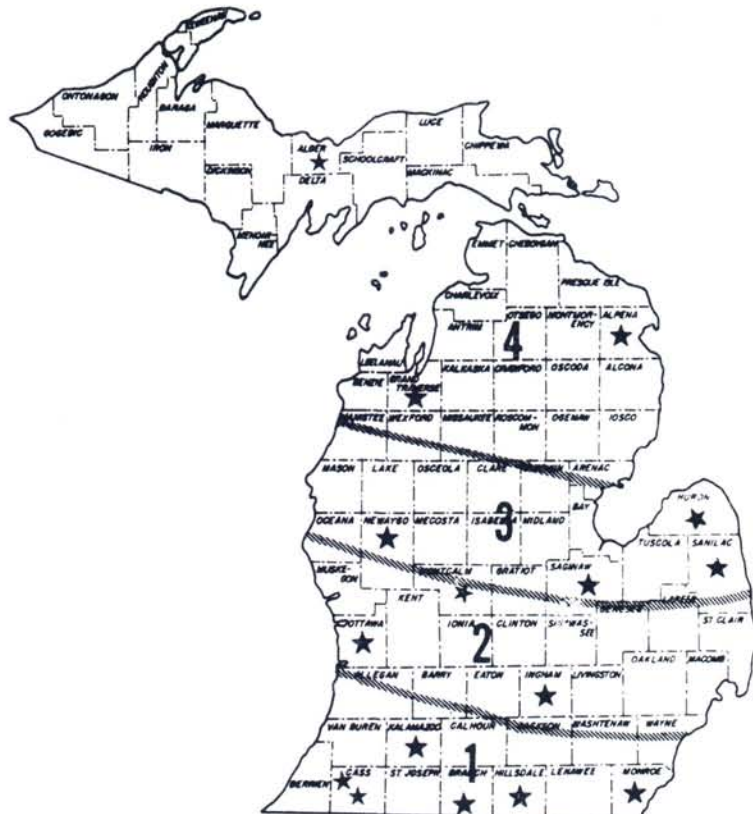
(1) Voluntary entries – All seed companies are invited each year to enter their hybrids in the trials. A fee is charged to cover some of the direct expenses.

(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 planted in Michigan. Extension entries are included to provide performance data on some of the hybrids not entered as voluntary entries. They are hybrids suggested by County Extension personnel on the basis of extent of use in the various areas of the state.

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

and compared in the same field using the same procedure. Table 21 presents an index of all hybrids entered in the 1968 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.



Corn Maturity Zones and Locations (★) of Trials

Michigan experimental hybrids and some experimental hybrids from seed companies 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 the 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, 14, 19, 20).

All hybrids in the Monroe, Ingham, and Saginaw County trials were compared at two plant populations (Tables 1, 8, 12). Yields from 36", 30", and 18" row spacings for the Ingham County trial are given in Table 9.

Irrigated and non irrigated comparisons were made in the Montcalm County trial, Table 15.

There were two locations in Cass County--upland soil with irrigation, Table 5, and muck soil, Table 6.

Planting of all trials in the Lower Peninsula was completed between May 1 to 21. The Upper Peninsula trial, Table 20, was planted June 13.

The 1968 growing season started early with unseasonably mild weather during most of March and April. Temperatures for the rest of the season alternated between below normal and above normal; the middle or latter part of each month, May to October, had above normal temperature. The longest period of below normal temperatures came in the first half of July.

A general killing frost did not occur until late

October, much later than normal at most locations. Nearly all hybrids reached full maturity at all test locations except in the Upper Peninsula.

Rainfall was generally adequate at all locations except in the Huron County trial (Tables 13, 14), where drouth effects were serious. Season totals during April to October were generally 1 to 3 inches above normal in southern Michigan, near normal in central Michigan, and 3 to 8 inches above normal in northern areas.

October and early November weather was good for corn harvest and dry-down of grain in the field. Moisture content of grain was lower than normal at most locations. In contrast, the 1967 harvest season was wet and grain moisture was unusually high.

The Michigan Crop Reporting Service estimates the 1968 average yield at 74.0 bushels per acre (the highest since 1961) on about 1,323,000 acres harvested for grain compared with 1967 averages of 65.0 bushels per acre on 1,407,000 acres. About 450,000 acres of corn were harvested for silage.

## HOW TO USE THIS BULLETIN

One, two, and three-year averages are presented for all hybrids tested during 1968, 1967 and 1966. 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 percent 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 contents were 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 CORN 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 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 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. One percent more moisture at harvest means a delay in maturity of about two days. Corn is mature when moisture is down to 35 percent in the grain or 40 percent in the ear. Ear corn is safe to crib when moisture content is below 25 percent.

**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 reduces 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.

Table 1.

Zone 1

**SOUTHERN MICHIGAN  
MONROE COUNTY TRIAL**

One, Two, and Three Year Averages -- 1968, 1967, 1966

Hybrid	% Moisture			Bushels Per Acre						% Stalk Lodging				% Root Lodging			
	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.			
				19100	25800	18400	24700	17600	23300	19100	25800	18400	24700	17600	23300	19100	25800
Michigan 280	20.4	22	21	102.6	89.9	90	72	—	—	0.8	4.2	12	11	—	—	0.0	0.0
Michigan 270	21.3	23	21	73.6	66.0	63	53	69	65	10.1	5.9	21	15	17	13	0.0	0.0
Blaney B 401 (2X)	21.5	—	—	87.7	80.4	—	—	—	—	0.8	2.4	—	—	—	—	0.0	0.0
Michigan 250	21.6	23	22	83.8	64.4	74	54	78	66	10.7	5.2	23	13	16	11	0.0	0.0
Michigan 300	21.8	23	23	77.6	70.4	75	60	78	66	7.8	2.4	18	13	13	10	0.0	0.0
Northrup King X 19 (Sp)	22.6	—	—	76.0	66.4	—	—	—	—	4.0	0.0	—	—	—	—	0.0	0.0
Michigan 400	23.1	24	23	95.3	82.7	86	69	89	78	3.1	2.9	11	8	7	5	0.0	0.0
Michigan 402-2X (2X)	23.2	24	24	95.1	89.1	90	77	97	90	7.2	4.8	11	9	8	7	0.0	0.0
DeKalb XL 306 (3X)	24.1	25	24	86.3	77.6	84	67	86	77	4.7	2.4	14	8	10	6	0.0	0.0
Michigan 463-3X (3X)	24.1	26	26	94.9	81.1	92	76	100	89	9.7	6.0	15	13	11	10	0.0	0.0
Northrup King PX 519 (Sp)	24.2	—	—	106.4	82.7	—	—	—	—	3.9	1.2	—	—	—	—	0.0	0.0
Pioneer 3775 (2X)	24.2	25	25	98.5	89.7	91	78	98	97	3.2	5.3	13	10	10	8	0.8	0.0
Michigan 550	24.3	26	25	99.3	80.7	91	73	96	85	2.4	4.1	11	7	8	5	0.8	0.0
<sup>2</sup> Northrup King PX 525 (Sp)	24.5	25	—	106.5	100.3	93	81	—	—	5.4	4.8	15	14	—	—	0.0	0.0
Pioneer 371	24.5	26	26	86.4	82.0	82	70	90	85	9.8	2.4	14	7	10	6	1.6	0.0
Funk Bros. G 4350 (2X)	24.5	25	25	78.9	72.6	74	67	83	73	2.4	4.1	9	7	5	5	0.0	0.0
Blaney B 500 (2X)	24.5	—	—	79.7	64.1	—	—	—	—	1.7	1.9	—	—	—	—	0.0	0.0
Weather Master EPX-4P (2X)	24.6	—	—	85.5	69.9	—	—	—	—	4.2	2.4	—	—	—	—	0.0	0.0
DeKalb XL 325 (3X)	25.0	26	26	72.6	71.2	73	65	83	81	2.4	1.8	12	12	9	9	0.0	0.0
Blaney 6616 (3X)	25.1	—	—	82.1	78.7	—	—	—	—	5.5	0.6	—	—	—	—	0.0	0.0
<sup>1</sup> Pioneer 3773 (2X)	25.2	26	—	112.2	82.5	103	77	—	—	3.9	0.6	5	3	—	—	0.0	0.0
<sup>1,2</sup> Northrup King PX 556 (3X)	25.7	—	—	132.2	99.3	—	—	—	—	3.8	3.6	—	—	—	—	0.0	0.0
Pioneer 354 A	26.0	27	—	100.3	85.2	83	65	—	—	5.5	4.1	22	11	—	—	0.0	0.0
<sup>2</sup> Blaney 6606 A (2X)	26.0	27	27	105.4	100.0	98	88	101	100	3.1	2.4	4	8	3	6	0.0	0.0
<sup>1,2</sup> Super Crost S 27 (2X)	26.1	—	—	120.9	117.2	—	—	—	—	3.9	3.0	—	—	—	—	0.0	0.0
<sup>1,2</sup> Pioneer 3570 (Sp)	26.2	—	—	108.6	106.8	—	—	—	—	2.3	4.2	—	—	—	—	0.0	0.0
Super Crost 233 (3X)	26.3	—	—	100.3	83.7	—	—	—	—	1.6	3.6	—	—	—	—	0.0	0.0
Pioneer 3715 (3X)	26.4	—	—	101.8	80.2	—	—	—	—	2.3	3.0	—	—	—	—	0.0	0.0
<sup>1</sup> Bayless SX 434 (2X)	26.5	—	—	127.7	94.5	—	—	—	—	3.1	2.4	—	—	—	—	0.0	0.0
Bayless SX 415 (2X)	26.7	—	—	89.4	69.0	—	—	—	—	3.8	0.6	—	—	—	—	0.0	0.0
<sup>2</sup> Northrup King PX 580 (3X)	26.7	—	—	105.1	104.6	—	—	—	—	3.8	3.0	—	—	—	—	0.0	0.0
<sup>1,2</sup> Michigan 568-3X (3X)	26.8	28	28	115.1	101.3	103	87	—	—	1.6	2.9	7	11	—	—	0.0	0.0
<sup>1,2</sup> Bayless SX 433-8 (2X)	26.8	—	—	122.0	102.2	—	—	—	—	2.3	1.2	—	—	—	—	0.0	0.0
Garno S 95 (2X)	26.9	27	27	88.0	63.6	77	62	84	77	4.6	4.7	13	9	10	7	0.0	0.0
Pioneer 3579 (Sp)	27.0	—	—	95.6	90.8	—	—	—	—	1.6	1.8	—	—	—	—	0.0	0.0
<sup>1,2</sup> Michigan 500-2X (2X)	27.0	27	26	120.1	103.9	110	90	113	107	1.5	1.8	5	6	4	5	0.0	0.0
Pioneer 3582 (2X)	27.1	—	—	95.4	98.1	—	—	—	—	0.8	0.0	—	—	—	—	0.0	0.0
<sup>1,2</sup> Blaney B 601 (2X)	27.3	27	—	127.0	105.5	111	86	—	—	2.3	3.0	8	7	—	—	0.0	0.0
Weather Master EPX-5P (2X)	27.3	—	—	92.8	96.5	—	—	—	—	3.1	1.2	—	—	—	—	0.0	0.0
Northrup King PX 610 (3X)	27.6	28	27	104.1	97.1	103	84	103	96	3.1	2.9	12	8	8	9	0.0	0.0
<sup>1,2</sup> Northrup King PX 47 (2X)	27.6	—	—	130.1	116.7	—	—	—	—	3.1	1.2	—	—	—	—	0.0	0.0
Northrup King PX 52 (2X)	27.6	28	28	75.7	79.2	78	64	89	82	4.8	1.2	11	9	8	6	0.0	0.0
<sup>1,2</sup> DeKalb XL 45 (2X)	27.8	27	27	114.9	103.7	103	85	107	103	0.8	1.2	8	7	6	5	0.0	0.0
P.A.G. 272 (3X)	28.1	29	—	75.7	74.7	76	63	—	—	3.1	2.4	13	10	—	—	0.0	0.0
Northrup King PX 50 (2X)	28.2	28	28	102.2	86.8	101	84	105	94	2.3	1.8	6	6	4	4	0.0	0.0
P.A.G. SX 9 (2X)	28.2	29	28	94.3	89.5	91	72	98	86	0.8	5.3	11	8	8	6	0.0	0.0
Funk Bros. G 4333 (2X)	28.4	—	—	91.2	90.2	—	—	—	—	3.8	1.2	—	—	—	—	0.0	0.0
<sup>1,2</sup> Weather Master SPX-6P (2X)	28.4	—	—	109.7	103.1	—	—	—	—	0.8	0.6	—	—	—	—	0.0	0.0
OYO 225 (2X)	28.4	29	—	72.6	56.5	81	58	—	—	6.1	0.6	10	6	—	—	0.0	0.0
DeKalb XL 346 (3X)	28.5	—	—	96.3	98.2	—	—	—	—	0.8	1.4	—	—	—	—	0.0	0.0

Table 1 – MONROE COUNTY TRIAL (Continued)

Hybrid	% Moisture			Bushels Per Acre						% Stalk Lodging			% Root Lodging				
	1968	2 Yrs.	3 Yrs.	1968		2 Yrs.		3 Yrs.		1968		2 Yrs.		3 Yrs.		1968	
				19100	25800	18400	24700	17600	23300	19100	25800	18400	24700	17600	23300	19100	25800
Super Crost 224	28.5	—	—	76.0	75.7	—	—	—	—	3.2	0.6	—	—	—	—	0.0	0.0
Super Crost S 30 A (2X)	29.5	29	28	82.9	82.5	83	72	93	87	4.0	0.6	11	8	8	6	0.0	0.0
P.A.G. SX 310 (Sp)	29.5	—	—	72.9	75.0	—	—	—	—	2.4	5.4	—	—	—	—	0.0	0.0
OYO 333 (2X)	29.8	30	—	112.2	90.8	100	77	—	—	0.8	1.7	6	6	—	—	0.0	0.0
Average	25.7	26	26	98.2	88.4	90	74	92	85	3.8	2.7	12	10	9	7	0.1	0.0
Range	20.4	22	21	72.6	56.5	63	53	69	65	0.8	0.0	4	6	3	4	0.0	
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	
	29.8	30	28	132.2	117.2	111	90	113	107	10.7	6.0	23	15	17	13	3.1	
Least significant difference	1.3	1	1	10.6	10.9	5	5	4	4								

1 – Significantly better than average yield at 19,100 population in 1968.

2 – Significantly better than average yield at 25,800 population in 1968.

	1968	1967	1966
Planted	May 8	May 17	May 9-10
Harvested	Oct. 15	Nov. 13	Nov. 10
Soil Type	Brookston clay loam	Brookston clay loam	Brookston loam
Previous crop	Corn	Corn	Corn
Rows	30''	36''	36''
Population	19,100 and 25,800	17,700 and 23,600	16,000 and 20,400
Fertilizer	112-128-182	160-144-120	130-120-120
Soil test: pH	6.5	6.5	7.2
P	99 (very high)	59 (high)	39 (high)
K	242 (high)	120 (medium high)	240 (high)

Farm Cooperator: Earl Creech, Dundee  
 County Agricultural Agents: R. J. Laser (deceased) and Paul F. Nevel, Monroe





Table 5.

Zone 1

**SOUTHERN MICHIGAN**  
IRRIGATED UPLAND SOIL – CASS COUNTY TRIAL  
One and Two Years – 1968 and 1967

Hybrid	% Moisture		Bushels Per Acre		% Stalk Lodging		% Root Lodging
	1968	2 yrs.	1968	2 yrs.	1968	2 yrs.	1968
Michigan 270	19.7	—	87.1	—	7.6	—	0.0
Michigan 250	20.6	—	118.2	—	4.5	—	1.9
Michigan 300	20.8	—	107.6	—	3.9	—	4.5
Michigan 280	21.0	—	110.4	—	3.8	—	2.6
Cowbell SX 24 (2X)	21.6	—	82.2	—	5.0	—	0.0
P.A.G. SX 48 (2X)	22.0	—	101.2	—	7.7	—	0.6
Northrup King X 19 (Sp)	22.3	—	114.6	—	3.2	—	0.0
Pioneer 3911 (2X)	22.4	—	134.0	—	1.3	—	0.0
Michigan 402-2X (2X)	22.4	24.7	116.8	117	5.9	6	0.6
Michigan 400	22.6	—	133.9	—	3.8	—	0.6
Gutwein 10 (2X)	23.6	—	87.5	—	7.6	—	0.0
DeKalb XL 306 (3X)	23.9	26	131.3	120	2.5	6	0.0
Blaney B 401 (2X)	23.9	—	122.3	—	1.3	—	0.0
Super Crost 2610	23.9	—	117.4	—	4.5	—	0.0
Migro M 12 SX (2X)	24.1	26	151.7	131	0.0	6	0.0
Pioneer 3775 (2X)	24.3	—	135.0	—	0.0	—	0.0
Michigan 463-3X (3X)	24.3	26	127.9	127	6.3	6	0.0
Migro M 110 A	24.8	—	120.6	—	3.9	—	0.0
Weather Master EP 40 (3X)	24.8	—	112.8	—	1.9	—	0.0
Northrup King PX 525 (Sp)	24.9	27	136.4	125	0.6	3	0.0
Michigan 550	24.9	27	126.6	125	3.2	3	0.6
Blaney B 500 (2X)	25.1	—	95.2	—	3.2	—	0.6
DeKalb XL 325 (3X)	25.3	28	113.4	116	2.6	3	0.0
Northrup King PX 519 (Sp)	25.5	—	136.2	—	1.9	—	0.6
Blaney 6616 (3X)	25.6	—	131.3	—	3.8	—	0.0
*Michigan 500-2X (2X)	25.6	28	154.9	142	0.6	2	0.6
Lowe SX 2 TP	25.6	—	133.9	—	2.6	—	0.0
Moews 84	25.8	—	93.9	—	3.2	—	1.9
Blaney 6606 A (2X)	25.8	—	127.2	—	2.5	—	0.6
Migro M 140	25.8	28	129.4	119	3.2	4	0.0
Pioneer 3579 (Sp)	26.0	—	140.0	—	1.3	—	0.6
Parker 250	26.4	—	126.7	—	1.3	—	0.0
DeKalb XL 335 (3X)	26.4	—	105.2	—	0.6	—	0.0
*Teweles SXT 24 (2X)	26.4	—	152.0	—	3.9	—	0.0
Northrup King PX 52 (2X)	26.6	28	102.2	107	6.3	6	0.0
P.A.G. SX 52 (2X)	26.6	28	121.0	128	1.3	4	0.0
*Pioneer 3773 (2X)	26.7	28	153.3	142	0.6	2	0.0
*Moews SX 327 (2X)	26.7	—	149.4	—	5.1	—	0.0
*Michigan 568-3X (3X)	26.8	—	153.6	—	6.3	—	0.0
*Northrup King PX 50 (2X)	26.8	28	153.7	129	1.3	2	0.0
Gutwein 120 (3X)	26.8	—	130.4	—	3.2	—	0.0
*Blaney B 601 (2X)	26.9	—	150.8	—	1.3	—	1.3
*Funk Bros. G 4384 (2X)	26.9	28	164.5	181	1.9	5	1.3
*Cowbell SX 112 (2X)	27.0	28	149.6	136	2.5	3	0.6
*Gutwein 20 (2X)	27.1	—	155.2	—	5.1	—	0.6
*Weather Master EPX-5P (2X)	27.1	—	156.3	—	1.3	—	0.0
Migro M 42-3X (3X)	27.1	—	125.4	—	5.6	—	0.6
*Northrup King PX 47 (2X)	27.2	—	151.2	—	3.2	—	0.0
*Northrup King PX 610 (3X)	27.2	29	164.5	139	1.9	2	0.6
Wolverine W 175 (2X)	27.4	—	127.6	—	1.3	—	0.0
Todd M 55	27.6	—	140.5	—	0.6	—	0.0
Parker 350	27.6	—	111.8	—	3.2	—	0.0
Migro M 22 SX (2X)	27.6	29	128.2	126	5.1	4	0.0
*Northrup King PX 580 (3X)	27.8	—	159.6	—	3.2	—	2.5
DeKalb XL 45 (2X)	27.8	29	130.0	128	2.5	2	0.0
Bayless SX 415 (2X)	27.8	30	128.0	126	5.7	5	1.3
Pioneer 3582 (2X)	27.8	—	142.5	—	0.0	—	1.3
*Pioneer 3570 (Sp)	27.9	—	167.4	—	1.3	—	0.0
*Bayless Sx 615-5 (2X)	28.0	30	151.0	137	10.1	5	0.6
*Northrup King PX 556 (3X)	28.3	—	147.3	—	2.6	—	0.0
Parker 633	29.2	—	115.5	—	3.2	—	0.6
Pride 724	30.0	—	128.7	—	5.7	—	0.0
Average	24.0	28	130.7	128	3.5	4	0.4
Range	19.7	25	82.2	107	0.0	2	0.0
	to	to	to	to	to	to	to
	30.3	30	167.4	142	10.1	6	4.5
Least significant difference	0.8	1	14.1	5			

Table 5. – CASS COUNTY TRIAL (Continued)

\*Significantly better than average yield in 1968.

	1968		1967	
	May 4	May 6	May 6	Nov. 8
Planted	May 4	May 6	May 6	Nov. 8
Harvested	Oct. 15			
Soil type	Kalamazoo sandy loam		Kalamazoo sandy loam	
Previous crop	Corn		Potatoes	
Population	23,800		17,200	
Rows	28''		40''	
Fertilizer	174-42-6		148-127-0	
Irrigation	5 times, 1'' each, July 8-2'' = mid-July, 2'' = early August			
Soil test: pH	6.8		6.7	
P	84 (high)		138 (high)	
K	272 (high)		389 (very high)	

Farm Cooperators: 1968 = Dave Cripes, Cassopolis; 1967 = Cliff Moulton, Decatur

County Agricultural Agent: Fred Sackrider, Cassopolis

Table 6.

Zone 1

**SOUTHERN MICHIGAN**  
MUCK SOIL – CASS COUNTY TRIAL  
One Year – 1968

Hybrid	% Moisture	Bushels Per Acre	% Stalk Lodging	% Root Lodging
P.A.G. SX 48 (2X)	20.3	67.0	6.3	0.0
Michigan 270	20.7	74.1	16.1	0.8
Michigan Exp. 65-2003A (2X)	20.7	94.9	12.0	0.0
Michigan 280	20.9	103.9	8.3	0.0
Northrup King X 19 (Sp)	21.0	87.6	4.0	0.0
Mich. Exp. 65-2003 (2X)	21.6	88.6	6.5	0.0
Michigan 250	22.3	77.8	9.3	0.0
Cowbell SX 24 (2X)	22.7	65.3	10.4	0.0
Michigan 300	23.5	91.6	4.5	0.9
Blaney B 401 (2X)	23.9	101.6	4.8	0.0
Pioneer 3911 (2X)	24.1	78.8	4.7	0.0
Gutwein 10 (2X)	24.5	88.3	3.9	0.0
Migro M-110 A	24.8	84.1	3.9	0.0
Michigan 400	24.8	84.6	6.1	0.0
DeKalb 306 (3X)	25.1	90.8	3.1	0.0
Michigan 402-2X (2X)	25.1	104.6	1.7	0.0
Migro M 12 SX (2X)	25.5	107.9	2.4	0.0
Weather Master EP 40 (3X)	25.6	73.7	4.7	0.0
*Gutwein 120 (3X)	25.6	116.1	3.7	0.0
DeKalb XL 325 (3X)	25.7	94.0	3.0	0.0
*Northrup King PX 519 (Sp)	25.7	125.7	6.2	0.0
*Northrup King PX 47 (2X)	25.9	124.8	4.5	0.0
Blaney B 601 (2X)	25.9	82.1	5.4	0.0
*Northrup King PX 525 (Sp)	25.9	109.2	2.3	0.0
Supercrost 2610	26.1	98.1	7.0	0.0
Blaney B 500 (2X)	26.1	85.4	12.5	0.0
*Weather Master EPX-5P (2X)	26.2	121.6	6.1	0.0
Moews 84	26.3	87.6	3.9	0.0
Pioneer 3775 (2X)	26.5	98.2	7.0	0.0
*Parker 250	26.7	111.8	6.8	0.0
Lowe SX2 TP	26.8	90.9	7.6	0.0
Blaney 6606 A (2X)	26.9	102.7	4.5	0.0
Migro M 140	26.9	92.9	3.8	1.5
*Pioneer 3773 (2X)	27.1	136.9	3.0	0.8
Teweles SXT 24 (2X)	27.1	98.7	3.8	0.0
*Michigan 500-2X (2X)	27.2	132.4	3.1	0.8
Pioneer 3582 (2X)	27.2	88.1	6.8	0.0
Cowbell SX 112 (2X)	27.4	92.5	7.0	0.0
*Northrup King PXP 10(3X)	27.4	111.9	6.8	0.0
Blaney 6616 (3X)	27.4	103.3	2.3	0.0
*Bayless SX 615-5 (2X)	27.4	111.8	8.4	0.0
Michigan 463-3X (3X)	27.5	88.2	12.7	0.0
*Funk Bros. G 4384 (2X)	27.5	112.7	12.1	0.0
Gutwein 20 (2X)	27.5	100.3	10.7	0.0
*Parker 350	27.6	109.7	9.1	0.0



**Table 6 - CASS COUNTY TRIAL (Continued)**

Hybrid	% Moisture		Bushels Per Acre		% Stalk Lodging		% Root Lodging	
	2	3	2	3	2	3	2	3
De Kalb XL 335 (3X)	27.6		94.2		10.7		0.0	
Moews SX 327 (2X)	27.7		107.4		5.3		0.0	
Pioneer 3579 (Sp)	27.8		91.2		2.3		0.0	
*Northrup King PX 580 (3X)	27.8		129.6		7.5		0.0	
Todd M 55	27.9		108.6		4.6		0.0	
Northrup King PX 52 (2X)	28.0		81.0		4.7		0.8	
*Bayless SX 415 (2X)	28.0		119.4		8.5		0.0	
*Michigan 568-3X (3X)	28.1		124.3		6.9		0.0	
Pioneer 3570 (Sp)	28.2		102.6		5.2		0.0	
Northrup King PX 556 (3X)	28.2		103.1		7.7		0.0	
P.A.G. SX 52 (2X)	28.3		98.2		3.1		0.0	
Migro M 42-3X (3X)	28.4		103.4		8.3		0.0	
Northrup King PX 50 (2X)	28.1		96.0		5.3		0.0	
Migro M-22 SX (2X)	28.7		96.9		3.7		0.0	
Pride 724	28.7		96.9		3.7		0.0	
*Wolverine W 175 (2X)	29.3		113.0		6.8		0.0	
De Kalb XL 45 (2X)	29.4		103.6		4.6		0.0	
Parker 633	30.8		74.1		3.8		0.0	
Average	26.7		98.9		6.1		0.1	
Range	20.3 to 30.8		65.3 to 136.9		1.7 to 16.1		0.0 to 1.5	
Least significant difference	1.3		10.3					

\*Significantly better than average yield in 1968.

Planted - May 15 Harvested - Oct. 15  
 Soil type - Carlisle Muck Previous crop - Corn Population = 18,800  
 Rows - 40" Fertilizer - 82-92-132 + 1% copper and zinc  
 Soil test: P<sup>H</sup> = 5.6, P = 101 (very high), K = 658 (very high)

Fam Cooperator: Oliver, Russell, and Roger Anderson, Cassopolis  
 County Agricultural Agent: Fred Sackrider, Cassopolis

**Table 7. Zone 2**  
**SOUTH CENTRAL MICHIGAN**  
**OTTAWA COUNTY TRIAL**  
 One, Two and Three Year Averages - 1968, 1967, 1966

Hybrid	% Moisture		Bushels Per Acre		% Stalk Lodging		% Root Lodging	
	2	3	2	3	2	3	2	3
	1968	yrs. yrs	1968	yrs. yrs.	1968	yrs.yrs.	1968	yrs.yrs.
Michigan 250	20.5	24 23	111.5	112 104	10.2	11 9	0.0	
Michigan 300	20.7	24 24	103.8	107 97	7.0	9 8	0.0	
Michigan 270	21.1	24 23	93.2	100 93	7.1	12 10	0.6	
Michigan Exp. 65-2003A (2X)	21.5	- -	128.9	- -	10.4	- -	0.0	
Michigan 280	21.5	25 -	129.9	122 -	6.0	10 -	0.0	
*Michigan Exp. 65-2003 (2X)	22.0	24 -	140.5	134 -	10.3	15 -	0.0	
Northrup King PX 22 (2X)	22.9	- -	112.7	- -	2.7	- -	0.0	
Pioneer 3799	23.7	- -	99.8	- -	11.8	- -	0.0	
Cowbell SX 102 (2X)	23.7	- -	134.9	- -	10.0	- -	0.0	
Weather Master EPX-4P (2X)	23.7	- -	100.7	- -	8.1	- -	0.0	
Funks G 10 A	23.9	27 -	112.0	118 -	7.7	12 -	0.0	
Weather Master EPX-3 P (2X)	24.1	- -	94.2	- -	4.6	- -	0.0	
Weather Master EP 30 (3X)	24.6	28 -	85.6	99 -	7.9	6 -	0.0	
Northrup King PX 480 (Sp)	24.9	28 27	111.9	119 105	7.0	10 9	0.0	
Funk Bros. G 17 A	25.0	28 28	126.0	125 116	5.4	13 10	0.0	
Michigan 400	25.0	28 27	125.7	121 108	5.4	7 5	0.0	
DeKalb XL 306 (3X)	25.2	- -	120.6	- -	9.0	- -	0.6	
Weather Master EP 40 (3X)	25.3	29 -	102.0	110 -	1.2	4 -	0.0	
Michigan 402-2X (2X)	25.4	28 28	128.6	130 120	4.8	11 9	0.0	
Funk Bros. G 4287 (3X)	25.5	28 -	111.8	116 -	4.9	9 -	0.0	
Pioneer 3675 (2X)	25.5	- -	116.7	- -	0.0	- -	0.0	
Wolverine 66 A	25.7	29 29	116.2	115 108	7.7	14 11	0.0	
*Michigan 550	25.8	29 29	140.5	132 119	4.5	6 5	0.0	
*Northrup King PX 525 (Sp)	25.9	29 -	149.1	138 -	6.7	5 -	0.0	
Michigan 463-3X (3X)	26.0	29 28	125.3	129 119	6.3	8 7	0.0	

**Table 7. - OTTAWA COUNTY TRIAL (Continued)**

Hybrid	% Moisture		Bushels Per Acre		% Stalk Lodging		% Root Lodging	
	2	3	2	3	2	3	2	3
	1968	yrs. yrs	1968	yrs. yrs.	1968	yrs.yrs.	1968	yrs.yrs.
DeKalb XL 315 (3X)	26.1	- -	108.9	- -	4.8	- -	0.0	
Funk Bros. G 18 A	26.2	28 -	113.2	116 -	7.0	14 -	0.0	
Pioneer 3715 (3X)	26.3	- -	120.9	- -	2.4	- -	0.0	
*Pioneer 3773 (2X)	26.4	30 30	153.2	140 124	5.0	12 8	0.0	
Northrup King PX 519 (Sp)	26.6	- -	138.7	- -	4.8	- -	0.0	
Funk Bros. G 4292 (3X)	26.7	- -	103.8	- -	2.4	- -	0.0	
*Michigan 568-3X (3X)	27.3	- -	146.6	- -	6.0	- -	0.6	
Northrup King PX 560 (Sp)	27.3	31 -	123.8	119 -	5.0	7 -	0.0	
*Pioneer 3579 (Sp)	27.7	- -	140.4	- -	8.4	- -	0.0	
*Michigan 500-2X (2X)	27.7	31 30	150.1	141 130	6.5	5 3	0.0	
Pioneer 371	28.2	32 32	137.1	126 111	8.6	11 8	0.0	
Northrup King PX 44 (2X)	28.4	32 32	108.9	115 103	3.1	5 5	0.0	
*Soy 13 (2X)	28.5	- -	144.2	- -	7.2	- -	0.0	
*Soy J 7	28.6	- -	143.6	- -	1.8	- -	0.0	
Soy J 31	28.8	- -	128.9	- -	4.1	- -	0.0	
*Pride R 450 (2X)	28.8	33 -	149.5	140 -	4.8	6 -	0.0	
DeKalb XL 45 (2X)	29.0	- -	133.8	- -	10.4	- -	0.0	
*Pride R 407 (2X)	29.3	- -	152.0	- -	3.5	- -	0.0	
Northrup King KM 567	30.1	33 32	110.9	118 110	4.5	10 7	1.9	
*Crows 428 (2X)	31.6	35 34	143.9	127 118	3.0	4 4	0.0	
Crows 420 (2X)	31.7	34 33	136.3	124 110	3.7	8 6	0.0	
Average	25.7	29 29	125.3	123 112	6.0	9 7	0.1	
Range	20.5 to 31.7	24 to 35	85.6 to 153.2	99 to 141	93 to 130	0.0 to 11.8	4 to 15	0.0 to 1.9
Least significant difference	0.9	1 1	13.8	5 4				

\*Significantly better than average yield in 1968.

	1968	1967	1966
Planted	May 17	May 25	May 26
Harvested	Oct. 31	Nov. 21	Nov. 3
Previous crop	Corn	Corn	Corn
Population	19,300	17,800	16,900
Rows	30"	36"	36"
Fertilizer:	160-80-40	140-64-32	144-96-48
Soil test: P <sup>H</sup>	6.2	6.2	6.9
P	120 (very high)	65 (high)	77 (high)
K	242 (high)	277 (high)	352 (very high)

Fam Cooperator: Marvin Patmos, Jamestown  
 County Agricultural Agent: Richard Machiele, Zeeland

Table 8.

Zone 2

**SOUTH CENTRAL MICHIGAN**  
**GRAIN — INGHAM COUNTY TRIAL**

One, Two and Three Year Averages — 1968, 1967, 1966

Hybrid	% Moisture			Bushels Per Acre					% Stalk Lodging					% Root Lodging			
	1968	2Yrs.	3Yrs.	1968		2Yrs.		3Yrs.		1968		2Yrs.		3Yrs.		1968	
				19500	25000	19000	24800	18400	23600	19500	25000	19000	24800	18400	23600	19500	25000
Michigan 270	25.7	28	27	97.8	91.1	103	104	99	98	1.9	10.9	2	6	3	7	0.0	4.7
Michigan 250	26.3	27	27	109.1	105.9	113	116	107	107	3.2	8.5	2	4	2	5	0.0	0.0
Michigan 280	26.4	27	—	117.2	125.9	118	131	—	—	1.8	1.5	2	1	—	—	0.0	1.5
Michigan Exp. 65-2003 (2X)	26.7	27	—	123.4	129.4	129	134	—	—	1.9	9.7	1	5	—	—	0.0	0.0
Michigan Exp. 65-2003 A (2X)	27.1	—	—	125.0	131.0	—	—	—	—	3.8	3.7	—	—	—	—	—	—
P.A.G. SX 48 (2X)	28.7	30	30	109.4	104.9	114	117	112	113	1.8	2.8	1	2	1	3	0.0	0.0
Michigan 300	28.8	30	29	109.3	114.3	108	115	102	104	3.6	1.6	2	1	2	3	7.2	12.5
Blaney B 500 (2X)	29.6	—	—	108.9	104.4	—	—	—	—	0.8	1.6	—	—	—	—	0.0	0.0
Funk Bros. G 4287 (3X)	29.6	—	—	105.6	100.5	—	—	—	—	1.8	4.1	—	—	—	—	0.0	0.0
Pioneer 3799	30.1	—	—	112.6	120.9	—	—	—	—	0.9	2.1	—	—	—	—	0.0	0.0
Funk Bros. G 17 A	30.3	31	31	107.9	112.1	117	120	113	115	5.0	1.4	3	1	3	1	0.0	0.0
DeKalb XL 306 (3X)	30.5	—	—	98.8	106.8	—	—	—	—	2.8	0.7	—	—	—	—	0.0	0.7
Blaney B 401 (2X)	30.7	32	—	115.4	118.3	119	122	—	—	0.0	1.5	0	1	—	—	0.0	1.5
Michigan 400	30.8	31	31	102.8	118.2	105	114	105	110	1.7	1.4	1	1	1	1	0.0	0.0
Northrup King PX 480 (Sp)	31.1	32	32	122.2	125.9	127	130	116	115	2.5	7.4	2	4	2	5	0.0	0.0
Weather Master EP 30 (3X)	31.1	32	—	100.4	97.0	108	103	—	—	0.0	0.8	0	0	—	—	0.0	0.0
Funk Bros. G 10 A	31.1	31	—	97.3	92.1	115	110	—	—	2.9	11.0	2	8	—	—	0.0	0.0
Pioneer 3911 (2X)	31.4	—	—	119.5	124.1	—	—	—	—	1.7	1.5	—	—	—	—	1.7	0.0
Northrup King PX 22 (2X)	31.6	—	—	107.6	109.6	—	—	—	—	1.9	4.8	—	—	—	—	0.0	0.0
Michigan 402-2X (2X)	31.8	32	32	119.1	125.5	123	139	122	134	0.8	1.4	0	1	0	1	0.0	0.0
DeKalb Ex 26 (2X)	31.9	—	—	111.0	110.8	—	—	—	—	0.8	0.0	—	—	—	—	0.0	0.0
Funk Bros. G 4350 (2X)	31.9	33	—	95.5	93.9	108	113	—	—	1.2	10.5	1	6	—	—	0.0	0.0
Super Crost S 19 (2X)	31.9	—	—	126.1	124.3	—	—	—	—	1.7	0.7	—	—	—	—	0.0	0.7
<sup>1</sup> Pioneer 3579 (Sp)	32.0	—	—	133.3	121.2	—	—	—	—	0.8	1.4	—	—	—	—	0.0	0.0
Pioneer 3715 (3X)	32.1	33	—	111.7	112.6	105	120	—	—	1.8	0.6	1	—	—	—	0.0	0.0
<sup>1,2</sup> Cowbell 112 SX (2X)	32.2	33	34	137.6	136.2	135	136	124	125	0.0	1.2	0	1	0	1	0.0	0.0
<sup>1,2</sup> Northrup King PX 525 (Sp)	32.2	33	—	141.4	137.0	124	129	—	—	0.0	3.3	0	2	—	—	0.0	0.0
DeKalb XL 315 (3X)	32.0	32	31	95.8	126.3	112	126	107	115	0.0	2.0	0	1	1	2	0.0	0.0
Wolverine 66 A	32.4	34	—	100.1	110.7	103	108	—	—	2.7	2.4	1	2	—	—	0.0	0.0
Funk Bros. G 4292 (3X)	32.5	—	—	96.7	107.2	—	—	—	—	0.0	0.7	—	—	—	—	0.0	0.0
Migro M 110 A	32.5	—	—	114.9	126.1	—	—	—	—	2.7	1.4	—	—	—	—	0.0	0.0
Funk Bros. G 4222 (2X)	32.5	—	—	116.9	121.3	—	—	—	—	1.6	0.0	—	—	—	—	0.0	0.0
Michigan 463-3X (3X)	32.5	33	34	112.2	117.8	120	126	121	123	5.6	2.7	3	2	3	2	0.0	0.0
Cowbell HR 58	32.6	—	—	96.6	89.8	—	—	—	—	2.9	0.7	—	—	—	—	0.0	0.0
<sup>1</sup> Teweles SXT 80 (3X)	32.8	—	—	134.1	126.5	—	—	—	—	0.0	1.5	—	—	—	—	0.0	0.0
Blaney 6616 (3X)	32.8	34	34	110.7	131.4	114	125	114	119	0.8	0.7	0	0	0	1	0.0	0.0
Pioneer 3773 (3X)	33.0	34	35	127.6	126.1	128	124	128	121	0.0	0.0	0	0	1	0	0.0	0.0
<sup>1</sup> Cowbell SX 206 (2X)	33.1	—	—	135.9	114.1	—	—	—	—	2.0	3.1	—	—	—	—	0.0	0.0
<sup>1,2</sup> Michigan 500-2X (2X)	33.2	34	34	139.5	139.2	133	147	131	144	0.8	2.0	0	1	1	1	0.0	0.0
<sup>1,2</sup> Blaney 6606 A (2X)	33.4	33	34	141.4	145.3	138	151	135	145	1.8	0.7	1	1	1	1	0.0	0.0
Crib Filler 3425 (3X)	33.4	—	—	108.3	114.4	—	—	—	—	0.0	1.7	—	—	—	—	0.0	0.0
<sup>1</sup> Super Crost S 27 (2X)	33.4	—	—	137.3	130.4	—	—	—	—	0.8	0.0	—	—	—	—	0.0	0.0
<sup>1,2</sup> Blaney B 601 (2X)	33.4	34	—	138.0	143.2	138	137	—	—	0.0	0.0	0	1	—	—	0.0	0.0
Pioneer 3775 (2X)	33.6	34	34	113.3	112.7	109	113	115	115	2.6	1.5	1	1	1	2	0.0	1.5
<sup>2</sup> Pride R 407 (2X)	33.7	—	—	116.8	135.2	—	—	—	—	2.6	0.0	—	—	—	—	0.0	0.0
<sup>1,2</sup> Michigan 568-3X (3X)	33.7	—	—	138.0	136.2	—	—	—	—	0.8	2.1	—	—	—	—	0.0	0.0
Teweles SXT 86 (3X)	33.7	—	—	108.5	114.5	—	—	—	—	0.9	6.4	—	—	—	—	0.0	0.0
DeKalb XL 325 (3X)	33.8	34	34	102.1	124.8	106	118	104	111	0.8	2.0	0	1	1	1	0.0	0.0
Michigan 550	33.8	35	35	122.9	118.2	118	124	115	118	0.0	2.3	0	2	0	2	0.0	1.5
P.A.G. 70	34.1	36	—	110.3	106.4	109	111	—	—	0.8	5.0	0	3	—	—	0.0	0.0
<sup>1,2</sup> Northrup King PX 519 (Sp)	34.1	—	—	133.4	140.2	—	—	—	—	0.0	0.0	—	—	—	—	0.0	0.0
Super Crost 224	34.5	—	—	97.5	104.0	—	—	—	—	9.5	4.9	—	—	—	—	0.0	0.0
OYO 360 (3X)	34.5	—	—	113.4	106.1	—	—	—	—	0.0	0.0	—	—	—	—	0.0	0.0
<sup>1,2</sup> Crib Filler 22 (2X)	34.8	34	34	131.3	142.4	121	140	—	—	0.0	0.7	—	—	—	—	0.0	0.0
<sup>1,2</sup> Pride R 450 (2X)	34.8	—	—	134.8	133.3	—	—	—	—	0.0	0.7	—	—	—	—	0.0	0.0

Table 8 – INGHAM COUNTY (Continued)

Hybrid	% Moisture			Bushels Per Acre						% Stalk Lodging					% Root Lodging		
	1968	2 Yrs.	3 Yrs.	1968		2 Yrs.		3 Yrs.		1968		2 Yrs.		3 Yrs.	1968		
				19500	25000	19000	24800	18400	23600	19500	25000	19000	24800	18400	23600	19500	25000
Migro M 12 SX (2X)	34.9	35	—	93.6	114.0	108	123	—	—	0.0	0.7	—	—	—	—	0.0	0.0
DeKalb XL 45 (2X)	35.3	35	35	122.8	131.1	119	128	116	119	0.0	0.0	0	0	0	0	0.0	0.0
Cowbell 107 SX (2X)	35.5	36	—	101.0	97.5	108	106	—	—	1.0	0.9	1	1	—	—	0.0	0.0
P.A.G. SX 52 (2X)	35.8	—	—	120.9	130.0	—	—	—	—	0.0	0.0	—	—	—	—	0.0	0.0
1 Super Crost S 30 A (2X)	36.1	37	37	130.8	123.7	115	120	118	122	0.0	0.7	0	0	0	1	0.0	0.0
Migro M 42-3X (3X)	36.3	—	—	117.2	127.1	—	—	—	—	0.8	0.7	—	—	—	—	0.0	0.0
1 P.A.G. 272 (3X)	37.3	36	—	132.9	118.2	125	128	—	—	0.8	0.7	0	0	—	—	0.0	0.7
1 Migro 540	37.6	—	—	133.3	115.8	—	—	—	—	0.0	0.0	—	—	—	—	0.0	0.0
Average	32.4	33	32	117.7	120.2	118	124	115	119	1.4	2.3	1	2	1	2	0.1	0.4
Range	25.7 to 37.6	27 to 37	27 to 37	93.6 to 141.4	89.8 to 145.3	103 to 138	103 to 151	99 to 135	98 to 145	0.0 to 9.5	0 to 11.0	0 to 3	0 to 8	0 to 3	0 to 7	0.0 to 7.2	0.0 to 12.5
Least Significant difference	1.5	1	1	12.8	13.2	5	5	4	4								

1 — Significantly better than average yield at 19,500 population in 1968.

2 — Significantly better than average yield at 25,000 population in 1968.

	1968	1967	1966
Planted	May 4	May 16	May 21
Harvested	Oct. 5	Oct. 14	Oct. 12
Soil type	Conover clay loam	Conover clay loam	Conover clay loam
Previous crop	Corn	Corn	Corn
Population	19,500 and 25,000	18,400 and 24,600	17,200 and 21,100
Rows	36"	36"	36"
Fertilizer	150-60-60	18,900 = 150-60-60; 24,600 = 252-104-104	17,200 = 150-60-210; 21,100 = 245-175-325
Soil Test: P <sup>H</sup>	6.6	6.6	6.3
P	59 (high)	99 (high)	63 (high)
K	315 (high)	275 (high)	293 (high)

Farm Cooperator: Michigan State University

Table 9

Zone 2

**SOUTH CENTRAL MICHIGAN  
GRAIN — INGHAM COUNTY TRIAL  
One Year — 1968**

Hybrid	% Moisture	Bushels Per Acre		
		36" Row	30" Rows	18" Rows
Michigan 270	25.7	97.8	94.5	118.1
Michigan 250	26.3	109.1	106.0	108.6
Michigan 280	26.4	117.2	135.4	122.2
Michigan Exp. 65-2003 (2X)	26.7	123.4	128.1	131.6
Michigan Exp. 65-2003 A (2X)	27.1	125.0	133.1	128.7
P.A.G. SX 48 (2X)	28.7	109.4	103.0	109.1
Michigan 300	28.8	109.3	111.0	128.4
Blaney B 500 (2X)	29.6	108.9	114.4	102.6
Funk Bros. G 4287 (3X)	29.6	105.6	107.7	123.5
Pioneer 3799	30.1	112.6	121.3	124.0
Funk Bros. G 17 A	30.3	107.9	130.2	126.8
De Kalb XL 306 (3X)	30.5	98.8	112.1	112.5
Blaney B 401 (2X)	30.7	115.4	117.8	135.0
Michigan 400	30.8	102.8	127.6	117.1
<sup>3</sup> Northrup King PX 480 (Sp)	31.1	122.2	130.7	148.4
Weather Master EP 30 (3X)	31.1	100.4	99.2	98.4
Funk Bros. G 10 A	31.1	97.3	103.0	106.6
Pioneer 3911 (2X)	31.4	119.5	131.1	114.7
Northrup King PX 22 (2X)	31.6	107.6	118.9	121.4
<sup>3</sup> Michigan 402-2X (2X)	31.8	119.1	137.0	143.9
De Kalb Ex 26 (2X)	31.9	111.0	111.5	118.3
Funk Bros. G 4350 (2X)	31.9	95.5	101.8	97.6
Super Crost S 19 (2X)	31.9	126.1	142.7	126.8
<sup>1,2,3</sup> Pioneer 3579 (Sp)	32.0	133.3	151.1	155.0
Pioneer 3715 (3X)	32.1	111.7	139.2	137.6
<sup>1,2</sup> Cowbell 112 SX (2X)	32.2	137.6	144.3	128.6
<sup>1,2,3</sup> Northrup King PX 525 (Sp)	32.2	141.4	167.4	170.5
De Kalb XL 315 (3X)	32.0	95.8	118.1	121.2
Wolverine 66 A	32.4	100.1	105.1	121.2
Funk Bros. G 4292 (3X)	32.5	96.7	118.0	94.4
Migro M 110 A	32.5	114.9	117.0	107.3
Funk Bros. G 4222 (2X)	32.5	116.9	129.8	137.1
Michigan 463-3X (3X)	32.5	112.2	113.1	124.7
Cowbell HR 58	32.6	96.6	114.9	120.8
<sup>1,2</sup> Teweles SXT 80 (3X)	32.8	134.1	150.5	124.4
Blaney 6616 (3X)	32.8	110.7	124.3	123.6
<sup>2,3</sup> Pioneer 3773 (2X)	33.0	127.6	160.3	159.8
<sup>1,2</sup> Cowbell SX 206 (2X)	33.1	135.9	145.4	123.2
<sup>1,2,3</sup> Michigan 500-2X (2X)	33.2	145.5	152.9	170.8
<sup>1,2,3</sup> Blaney 6606 A (2X)	33.4	141.4	158.2	160.8
Crib Filler 3425 (3X)	33.4	108.2	113.1	131.4
<sup>1,2</sup> Super Crost S 27 (2X)	33.4	137.3	149.3	122.7
<sup>1</sup> Blaney B 601 (2X)	33.4	138.0	138.2	139.8
Pioneer 3775 (2X)	33.6	113.3	130.5	131.1
<sup>3</sup> Pride R 407 (2X)	33.7	116.8	126.3	144.9
<sup>1,2,3</sup> Michigan 568-3X (3X)	33.7	138.0	147.6	143.9
Teweles SXT 86 (3X)	33.7	108.5	126.8	112.6
De Kalb XL 325 (3X)	33.8	102.1	116.4	110.4
Michigan 550	33.8	122.9	130.4	118.6
P.A.G. 70	34.1	110.3	125.7	126.9
<sup>1,2,3</sup> Northrup King PX 519 (Sp)	34.1	133.4	145.1	169.6
Super Crost 224	34.5	97.5	102.4	126.0
OYO 360 (3X)	34.5	113.4	114.9	132.2
<sup>1,2,3</sup> Crib Filler 22 (2X)	34.8	131.3	159.7	164.3
<sup>1</sup> Pride R 450 (2X)	34.8	134.8	143.5	127.4
Migro M 12 SX (2X)	34.9	93.6	105.8	94.1
De Kalb XL 45 (2X)	35.3	122.8	139.7	136.5
Cowbell 107 SX (2X)	35.5	101.0	114.1	115.9
P.A.G. SX 52 (2X)	35.8	120.9	134.4	122.1
<sup>1,2,3</sup> Super Cpost S 30 A (2X)	36.1	130.8	149.5	154.9
Migro M 42-3X (3X)	36.3	117.2	139.7	140.9
<sup>1</sup> P.A.G. 272 (3X)	37.3	132.9	135.3	136.5
<sup>1</sup> Migro M 540	37.6	133.3	126.0	125.2
Average	32.4	117.7	129.4	129.8
Range	25.7 to 37.6	93.6 to 141.4	94.5 to 167.4	94.1 to 170.8
Least significant difference	1.5	12.8	14.8	14.0

Table 9. — INGHAM COUNTY TRIAL (Continued)

- 1 — Significantly better than average yield in 36" rows.  
2 — Significantly better than average yield in 30" rows.  
3 — Significantly better than average yield in 18" rows.

Planted — May 4  
Soil type — Conover clay loam  
Rows — 36", 30" and 18"  
Populations: 36" rows = 19,500; 30" rows = 19,800; 18" rows = 19,300  
Fertilizer: 150-60-60  
Soil test: P<sup>H</sup> = 6.6 P = 59 (high) K = 316 (high)  
Harvested — Oct. 5  
Previous crop — corn  
Farm Cooperator: Michigan State University, East Lansing

Table 10

Zone 2

**SOUTH CENTRAL MICHIGAN  
SILAGE — INGHAM COUNTY TRIAL  
One Year — 1968**

Hybrid	% Moisture in Ears	Tons Per Acre		% Ears in Dry Weight
		Green Wt.	Dry Wt.	
Michigan 250	37.7	12.1	5.0	59.3
Michigan 270	39.0	10.9	4.7	60.4
Michigan 300	39.2	12.7	5.7	63.6
Michigan 280	39.4	13.6	6.0	62.2
Michigan Exp. 65-2003A(2X)	39.4	12.5	5.4	69.0
Michigan Exp. 65-2003 (2X)	39.4	12.6	5.4	67.9
Northrup King PX 22 (2X)	39.6	11.6	4.7	60.5
Funk Bros. G 4287 (3X)	40.7	14.4	5.9	58.9
Pioneer 3911 (2X)	41.2	13.8	5.3	61.4
Funk Bros. G 4350 (2X)	41.2	9.5	4.0	51.8
Michigan 400	41.2	12.3	5.5	55.0
Blaney B 401 (2X)	41.2	13.7	5.4	58.3
Michigan 402-2X (2X)	41.5	14.3	5.8	61.0
De Kalb XL 306 (3X)	42.0	14.1	5.3	58.7
P.A.G. SX 48 (2X)	42.1	11.8	4.7	58.1
Weather Master EP 30 (3X)	42.2	11.6	4.5	59.9
Pioneer 3799	42.5	12.6	5.1	61.7
Michigan 463-3X (3X)	42.7	13.0	5.5	58.2
Super Crost S19 (2X)	42.7	13.8	5.6	60.1
Funk Bros. G 4292 (3X)	42.9	13.9	5.2	57.6
Blaney B 500 (2X)	43.7	13.7	5.1	62.5
Funk Bros. G 4222 (2X)	43.7	16.0	5.8	58.9
Funk Bros. G 10 A	43.8	11.6	4.6	58.4
Super Crost S 27 (2X)	43.8	14.6	5.8	58.3
Crib Filler 3425 (3X)	43.9	16.2	5.9	57.1
Northrup King PX 480 (Sp)	44.0	14.3	4.7	55.9
De Kalb Ex. 26 (2X)	44.1	13.2	4.7	63.5
Cowbell 112 SX (2X)	44.1	16.6	6.0	58.4
Funk Bros. G 17 A	44.2	13.6	5.2	57.0
Northrup King PX 525 (Sp)	44.3	16.2	5.9	58.6
P.A.G. 70	44.3	15.6	5.6	55.8
De Kalb XL 315 (3X)	44.4	11.3	4.5	61.2
Blaney B 6616 (3X)	44.5	15.4	5.7	52.8
Cowbell HR 58	44.6	14.5	5.2	65.7
Blaney B 601 (2X)	44.6	16.6	6.3	53.9
Migro M 110 A	44.8	13.7	4.8	59.3
Michigan 550	44.8	15.5	5.8	54.1
Pioneer 3579 (Sp)	44.9	14.5	5.6	62.3
Michigan 500-2X (2X)	44.9	17.7	6.1	63.9
Cowbell SX 206 (2X)	44.9	14.6	5.4	60.1
Teweles SXT 80 (3X)	45.2	16.8	6.1	55.8
Pioneer 3715 (3X)	45.3	15.6	5.9	57.5
Pioneer 3773 (2X)	45.4	15.7	5.7	60.0
Pioneer 3775 (2X)	45.5	15.8	6.0	55.1
Wolverine 66 A	45.5	14.1	5.0	57.4
De Kalb XL 325 (3X)	45.7	13.4	4.6	59.9
P.A.G. SX 52 (2X)	46.0	16.9	5.8	58.7
Crib Filler 22 (2X)	46.0	14.5	6.0	55.9
Northrup King PX 519 (Sp)	46.3	16.5	5.9	58.2
Cowbell 107 SX (2X)	46.4	12.2	4.1	57.2

Table 10 - INGHAM COUNTY (Continued)

Hybrid	% Moisture in Ears	Tons Per Acre		% Ears in Dry Weight
		Green Wt.	Dry Wt.	
Blaney 6606 A (2X)	46.4	13.9	5.4	59.9
Teweles SXT 86 (3X)	46.6	15.3	5.2	60.9
Super Crost 224	46.7	12.9	4.5	56.0
Michigan 568-3X (3X)	46.7	18.6	6.3	58.3
Migro M 42-3X (3X)	46.9	16.7	5.5	56.9
DeKalb XL 45 (2X)	47.7	15.7	5.2	58.0
Super Crost S 30 A (2X)	48.0	16.9	5.8	58.5
Pride R 407 (2X)	48.2	15.9	5.4	57.2
Migro M 12 SX (2X)	48.4	16.4	5.4	54.5
P.A.G. 272 (3X)	49.1	17.9	6.0	52.7
Pride R 450 (2X)	50.4	19.4	6.5	56.4
OYO 360 (3X)	51.1	16.8	5.8	54.4
Migro M 540	53.3	21.3	6.9	47.1
Average	44.2	14.7	5.4	58.9
Range	37.7 to 53.3	9.5 to 21.3	4.0 to 6.9	47.1 to 69.0
Least significant difference	2.1	1.1	.4	3.0

Planted - May 4 Harvested - September 19  
 Soil Type: Conover clay loam Previous crop - Corn  
 Rows - 36" Plant Population - 19,600  
 Fertilizer: 15-7-60-60  
 Soil Test: pH = 6.6, P = 59 (high), K = 316 (high)

Farm Cooperator: Michigan State University, East Lansing

Table 11. Zone 3

**NORTH CENTRAL MICHIGAN  
 SANILAC COUNTY TRIAL**

One, Two and Three Year Averages - 1968, 1967, 1965

Hybrid	% Moisture		Bushels Per Acre		% Stalk Lodging		% Root Lodging	
	2	3	2	3	2	3	2	3
	1968	yrs. yrs	1968	yrs. yrs.	1968	yrs.yrs.1968		
Pioneer 3854 (2X)	20.3	-	109.4	-	4.3	-	0.0	
Michigan 270	20.4	25 27	108.8	120 105	9.2	7 6	1.2	
Michigan 300	20.5	27 29	109.8	115 104	4.2	5 4	0.6	
Michigan 250	20.6	26 28	110.1	117 103	6.9	4 7	0.0	
*Michigan Exp.65-2003 A(2X)	21.0	-	139.4	-	5.3	-	0.0	
*Michigan 280	21.4	26	135.4	135	2.9	2	0.0	
Northrup King PX 417 (3X)	21.8	-	105.3	-	2.4	-	0.0	
Pride R 129 (3X)	21.9	-	72.6	-	16.4	-	0.0	
Jacques 900 J	22.1	28 30	83.6	100 91	4.1	3 4	0.0	
Funk Bros. G 4170 (3X)	22.1	-	78.6	-	12.0	-	0.0	
Pride 137	22.3	-	102.6	-	5.4	-	0.0	
*Michigan Exp. 65-2003 (2X)	22.3	-	146.0	-	4.3	-	0.0	
Northrup King PX 442 (3X)	22.5	-	124.3	-	2.4	-	0.0	
Wolverine 46 A	22.6	27 31	122.8	120 109	0.6	1 3	0.0	
P.A.G. SX 48 (2X)	22.9	27	122.8	129	5.2	3	0.0	
*Pioneer 3956 (3X)	22.9	-	138.6	-	1.2	-	0.0	
Funk Bros. G 4287 (3X)	22.9	-	127.4	-	2.4	-	0.0	
Pioneer 388	23.1	28 30	121.5	126 109	7.3	4 7	0.0	
Funk Bros. G 4110 (2X)	23.3	-	89.7	-	8.9	-	0.0	
*Michigan 400	23.3	28 32	135.3	126 113	2.4	2 2	0.0	
Northrup King PX 446 (Sp)	23.4	28	129.2	122	1.8	2	0.0	
Green Belt 41	23.6	29	95.9	113	4.2	4	0.0	
Green Belt 31	23.8	28	108.0	120	2.9	2	0.0	
WeatherMaster EPX-3P (2X)	23.9	-	100.3	-	1.2	-	0.0	
*Michigan 402-2X (2X)	24.0	29 32	144.8	140 123	2.3	2 3	0.0	
Northrup King PX 22 (2X)	24.0	-	106.5	-	4.1	-	0.0	
P.A.G. 41	24.1	29	133.0	122	1.2	1	0.0	
*Green Belt SX 362 (2X)	24.6	29 33	142.4	137 114	2.3	2 4	0.0	
DeKalb XL 306 (3X)	24.7	-	111.1	-	3.6	-	0.0	
Green Belt E 16	24.7	30	95.8	101	3.0	2	0.0	
Green Belt 316	24.8	-	100.7	-	1.7	-	0.0	
Wolverine 39	24.8	30 32	117.9	118 108	2.3	1 1	0.0	
*P.A.G. 45	25.1	30 33	147.7	131 114	2.3	2 3	0.0	
Asgrow ATC 45	25.6	-	126.6	-	0.0	-	0.0	
DeKalb XL 315 (3X)	25.8	-	127.9	-	3.0	-	0.0	

Table 11. - SANILAC COUNTY TRIAL (Continued)

Hybrid	% Moisture		Bushels Per Acre		% Stalk Lodging		% Root Lodging			
	2	3	2	3	2	3	2	3		
	1968	yrs. yrs	1968	yrs. yrs.	1968	yrs.yrs.1968				
Funk Bros. G 17 A	25.9	30 33	130.0	127 114	7.5	4 6	0.0			
Funk Bros. G 4350 (2X)	25.9	30	95.9	105	2.4	2	0.0			
*Northrup King PX 480 (Sp)	26.0	31	155.2	146	8.1	6	0.0			
Weather Master EP 30 (3X)	26.1	31	84.6	97	0.0	0	0.0			
Michigan 463-3X (3X)	26.2	33	134.6	133	7.7	4	0.0			
*Pioneer 368	26.4	34 36	141.6	123 107	2.9	2 1	0.0			
Northrup King PX 487 (3X)	26.7	31 32	108.1	109 101	7.4	7 6	0.0			
Weather Master EP 20 (3X)	26.7	-	83.5	-	0.6	-	0.0			
*Pioneer 3775 (2X)	27.8	-	150.3	-	3.0	-	0.0			
Michigan 550	28.1	33 35	126.7	125 110	3.1	3 3	0.0			
*Pioneer 3773 (2X)	28.1	-	159.7	-	0.0	-	0.0			
*Michigan 500-2X (2X)	28.4	34	154.7	148	0.6	0	0.0			
Average	24.2	29 31	122.1	125 108	3.9	3 4	0.0			
Range	20.3 to 28.4	25 to 34	27 to 36	72.6 to 159.7	97 to 148	91 to 123	0.0 to 16.4	0 to 7	1 to 7	0.0 to 1.2
Least significant difference	0.7	1	1	13.0	5	4				

\*Significantly better than average yield in 1968.

	1968	1967	1965
Planted	May 6	May 6	May 18
Harvested	Oct. 29	Oct. 26	Nov. 6
Soil type	Brookston clay loam	Brookston clay loam	Brookston clay loam
Previous crop	Corn	Corn	Corn
Population	18,900	17,100	17,500
Rows	30"	36"	36"
Fertilizer	143-70-160	115-60-30	99-55-55
Soil test: pH	6.5	6.8	6.1
P	54 (high)	52 (high)	32 (medium)
K	136 (medium)	175 (medium)	156 (medium)

Farm Cooperator: Orville Orchard, Applegate  
 County Agricultural Agent: Rex Sieting, Sandusky

Table 12.

Zone 3

**NORTH CENTRAL MICHIGAN**  
**SAGINAW COUNTY TRIAL**  
**One, Two and Three Year Averages – 1968, 1967, 1966**

Hybrid	% Moisture			Bushels Per Acre						% Stalk Lodging					% Root Lodging				
	1968	2 Yrs.	3 Yrs.	19400		24900		18300		23500		17700		22600		19400		24900	
	1968	2 Yrs.	3 Yrs.	19400	24900	18300	23500	17700	22600	19400	24900	18300	23500	17700	22600	19400	24900		
Pioneer 3854 (2X)	20.8	23	—	90.7	89.3	91	89	—	—	0.0	4.6	0	2	—	—	0.0	0.0		
Pioneer 3956 (2X)	20.8	—	—	90.8	93.3	—	—	—	—	1.5	5.6	—	—	—	—	0.0	0.0		
Michigan Exp. 65-2003 (2X)	21.0	23	—	107.8	119.7	115	120	—	—	4.0	1.2	2	1	—	—	0.8	3.6		
Northrup King PX 417 (3X)	21.2	—	—	69.5	82.1	—	—	—	—	5.6	7.3	—	—	—	—	12.9	1.3		
Northrup King PX 446 (Sp)	21.3	24	24	91.5	87.7	97	96	—	—	0.0	5.3	2	3	—	—	0.0	0.0		
Michigan 270	21.4	23	22	93.1	91.5	96	92	83	80	10.6	13.5	7	8	6	7	8.9	4.7		
<sup>1,2</sup> Michigan Exp. 65-2003 A (2X)	21.5	—	—	114.5	123.2	—	—	—	—	2.3	3.0	—	—	—	—	0.8	2.4		
Pride R 129 (3X)	21.5	—	—	87.5	108.1	—	—	—	—	5.0	10.8	—	—	—	—	0.0	9.6		
Northrup King PX 442 (3X)	21.8	—	—	96.8	114.2	—	—	—	—	1.7	2.4	—	—	—	—	0.9	0.6		
Michigan 250	22.0	24	23	99.0	109.6	100	103	85	87	1.6	1.8	2	2	2	4	4.8	3.0		
Pride R 118 (3X)	22.1	—	—	68.8	77.0	—	—	—	—	34.4	34.7	—	—	—	—	8.0	9.2		
Weather Master EP 10 (3X)	22.6	—	—	78.6	83.6	—	—	—	—	27.8	22.6	—	—	—	—	2.4	0.0		
Michigan 300	22.7	24	24	97.8	95.4	98	95	86	82	0.0	6.0	1	5	3	6	21.0	4.0		
Pioneer 3675	22.7	26	26	97.5	100.6	102	100	91	83	1.5	2.9	2	2	1	2	0.0	1.2		
Northrup King PX 22 (2X)	22.7	—	—	84.0	107.6	—	—	—	—	0.8	3.5	—	—	—	—	0.8	5.2		
DeKalb XL 304 (3X)	22.8	25	24	96.3	97.7	99	98	88	85	8.2	2.3	5	1	7	2	3.2	1.2		
Northrup King PX 480 (Sp)	23.1	26	26	100.4	105.6	108	109	86	86	4.7	1.8	3	3	3	9	0.0	0.0		
Weather Master EPX-3 (2X)	23.1	—	—	90.8	86.0	—	—	—	—	8.3	0.6	—	—	—	—	0.0	6.0		
Pioneer 3911 (2X)	23.1	—	—	112.0	113.5	—	—	—	—	0.8	3.6	—	—	—	—	0.0	6.2		
Jacques 951	23.2	—	—	85.9	104.6	—	—	—	—	0.8	0.6	—	—	—	—	1.6	1.3		
<sup>1</sup> Michigan 280	23.2	24	—	113.6	107.8	112	104	—	—	3.9	3.6	3	3	—	—	12.6	5.3		
Blaney B 500 (2X)	23.2	—	—	110.8	119.9	—	—	—	—	0.0	1.8	—	—	—	—	4.1	0.6		
Pioneer 3799 (3X)	23.3	—	—	103.0	111.5	—	—	—	—	2.4	1.7	—	—	—	—	0.0	1.7		
<sup>2</sup> Blaney B 401 (2X)	23.5	25	—	106.2	120.7	109	112	—	—	0.0	1.2	0	1	—	—	0.0	1.2		
Michigan 400	23.6	26	26	98.3	109.3	102	109	88	93	3.2	0.0	3	1	2	3	0.8	1.2		
Northrup King KE 497	23.8	27	27	104.9	114.6	105	109	92	91	4.8	1.8	3	1	4	3	0.8	1.8		
Funk Bros. G 4287 (3X)	23.8	—	—	110.4	116.3	—	—	—	—	0.8	2.9	—	—	—	—	14.6	1.2		
Michigan 402-2X (2X)	24.0	26	26	111.3	115.4	116	121	101	100	2.4	2.3	1	2	1	2	2.3	0.6		
Weather Master EPX-4 (2X)	24.0	—	—	91.5	105.4	—	—	—	—	0.8	0.0	—	—	—	—	7.4	3.6		
Funk Bros. G 10 A	24.4	26	—	102.8	93.8	103	94	—	—	1.6	1.2	—	—	—	—	12.6	12.9		
<sup>2</sup> Weather Master EPX-5 (2X)	24.5	—	—	103.5	124.8	—	—	—	—	1.6	2.4	—	—	—	—	2.3	0.6		
Weather Master EP 40 (3X)	24.6	—	—	90.5	105.9	—	—	—	—	0.0	0.6	—	—	—	—	0.0	0.0		
Weather Master EP 30 (3X)	24.7	27	—	89.4	80.6	99	94	—	—	2.5	3.6	2	2	—	—	2.5	1.8		
<sup>1</sup> Super Crost S 19 (2X)	24.8	—	—	116.0	118.4	—	—	—	—	0.0	0.6	—	—	—	—	4.8	0.0		
Northrup King PX 487 (3X)	24.9	—	—	89.9	89.8	—	—	—	—	1.6	3.2	—	—	—	—	12.3	0.0		
Green Belt E 16	24.9	—	—	73.2	93.3	—	—	—	—	1.6	0.0	—	—	—	—	0.0	0.0		
Michigan 463-3X (3X)	25.0	27	28	99.2	105.9	111	113	96	96	6.3	2.4	4	2	3	3	3.1	3.6		
Wolverine 39	25.1	—	—	96.9	105.2	—	—	—	—	0.8	1.8	—	—	—	—	0.0	0.0		
Pride R 200 (2X)	25.1	—	—	101.9	99.7	—	—	—	—	1.6	3.0	—	—	—	—	8.1	0.0		
Green Belt SX 362 (2X)	25.1	—	—	105.8	116.9	—	—	—	—	2.4	0.0	—	—	—	—	1.6	1.3		
DeKalb XL 15 (2X)	25.1	27	27	99.6	96.2	110	103	91	85	10.5	1.2	6	3	7	7	0.0	0.0		
P.A.G. 41	25.3	—	—	68.0	78.3	—	—	—	—	1.6	3.8	—	—	—	—	1.6	1.3		
Funk Bros. G-18 A	25.7	28	27	100.8	94.3	103	97	89	83	4.7	1.8	2	1	2	3	0.0	4.9		
Pioneer 368	25.8	28	28	111.2	102.8	112	105	94	86	0.8	1.2	0	1	1	2	10.6	0.0		
Super Crost 201	25.9	—	—	101.1	108.6	—	—	—	—	3.3	0.6	—	—	—	—	0.0	0.6		
<sup>2</sup> Blaney 6606 A (2X)	25.9	—	—	112.6	126.6	—	—	—	—	1.6	0.6	—	—	—	—	4.0	0.0		
<sup>1</sup> Pioneer 3715 (3X)	26.3	28	—	124.6	113.5	126	110	—	—	0.0	1.2	0	1	—	—	1.6	0.6		
Michigan 550	26.3	28	28	98.2	119.5	108	115	96	96	1.7	0.6	1	2	1	2	0.8	0.6		
DeKalb XL 325 (3X)	26.6	29	28	106.4	95.3	117	109	102	95	0.8	0.0	0	0	1	1	0.0	0.0		
Funk Bros. G 17 A	26.7	28	—	93.9	99.0	98	101	—	—	0.8	0.0	2	1	—	—	19.7	19.4		
<sup>1,2</sup> Michigan 500-2X (2X)	26.7	29	29	123.5	133.9	123	127	109	113	0.8	0.6	1	2	1	2	2.3	0.6		
Blaney 6616 (3X)	26.8	—	—	107.0	118.1	—	—	—	—	0.8	0.0	—	—	—	—	0.0	0.0		
Funk Bros. G 4292 (3X)	26.8	—	—	106.1	100.6	—	—	—	—	1.6	1.1	—	—	—	—	0.0	1.1		
<sup>1,2</sup> Funk Bros. G 4333 (2X)	26.9	—	—	121.0	130.8	—	—	—	—	0.8	0.0	—	—	—	—	0.0	4.7		
<sup>1,2</sup> Pioneer 3773 (2X)	27.0	29	28	114.7	131.6	112	125	91	98	0.9	0.0	1	0	1	0	3.5	0.0		

**Table 12 NORTH CENTRAL MICHIGAN (Continued)**

Hybrid	% Moisture			Bushels Per Acre						% Stalk Lodging						% Root Lodging	
	1968	2 Yrs.	3 Yrs.	1968		2 Yrs.		3 Yrs.		1968		2 Yrs.		3 Yrs.		1968	
				19400	24900	18300	23500	17700	22600	19400	24900	18300	23500	17700	22600	19400	24900
Pioneer 3775 (2X)	27.1	29	-	92.5	112.0	102	114	-	-	0.0	0.0	0	1	-	-	7.2	1.8
Pioneer 371	27.2	-	-	111.6	109.0	-	-	-	-	0.8	1.2	-	-	-	-	1.6	0.0
<sup>1,2</sup> Michigan 568-3X (3X)	27.4	-	-	123.0	125.9	-	-	-	-	0.8	1.2	-	-	-	-	0.0	1.2
<sup>2</sup> DeKalb XL 45 (2X)	28.9	31	30	110.9	124.6	113	118	101	101	0.0	0.0	1	1	1	1	0.0	0.0
<sup>1</sup> Pride R 407 (2X)	29.1	31	-	118.5	115.4	120	113	-	-	0.8	1.7	0	1	-	-	2.3	2.3
<b>Average</b>	<b>24.5</b>	<b>27</b>	<b>26</b>	<b>101.9</b>	<b>108.0</b>	<b>109</b>	<b>109</b>	<b>93</b>	<b>91</b>	<b>3.1</b>	<b>3.0</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3.7</b>	<b>2.3</b>
<b>Range</b>	<b>20.8</b>	<b>23</b>	<b>22</b>	<b>68.0</b>	<b>77.0</b>	<b>91</b>	<b>89</b>	<b>83</b>	<b>80</b>	<b>0.0</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0.0</b>	<b>0.0</b>
	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>	<b>to</b>
	<b>29.3</b>	<b>32</b>	<b>30</b>	<b>123.5</b>	<b>133.9</b>	<b>126</b>	<b>127</b>	<b>109</b>	<b>113</b>	<b>34.4</b>	<b>34.7</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>9</b>	<b>21.0</b>	<b>19.4</b>
<b>Least Significant Difference</b>	<b>1.1</b>	<b>1</b>	<b>1</b>	<b>11.2</b>	<b>12.1</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>								

1 - Significantly better than average yield at 19,400 population in 1968.  
 2 - Significantly better than average yield at 24,900 population in 1968.

	1968	1967	1966
Planted	May 7	May 3	May 5
Harvested	Oct. 22	Nov. 2	Oct. 23
Soil type	Brookston clay loam	Brookston clay loam	Brookston clay loam
Previous crop	Oats seeded to clover	Beets	Corn
Rows	30**	36**	36**
Populations	19,400 and 24,900	17,200 and 22,000	16,500 and 20,800
Fertilizer	119-112-54	21-84-42	21-84-42
Soil test: pH	7.3	7.1	7.1
P	50 (high)	94 (high)	71 (high)
K	157 (medium)	505 (very high)	259 (high)

Farm Cooperators: Walter Reinbold and Sons, Reese  
 County Agricultural Agent: Ray Vasold, Saginaw

Table 13. Zone 3

**NORTH CENTRAL MICHIGAN  
 GRAIN - HURON COUNTY TRIAL**

One, Two and Three Year Averages - 1968, 1967, 1966

Hybrid	% Moisture			Bushels Per Acre			% Stalk Lodging			% Root Lodging		
	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.	3 Yrs.
Michigan 270	19.5	24	24	34.4	75	73	37.3	21	19	0.0		
Michigan 250	20.6	26	25	41.7	77	71	30.6	17	14	0.0		
*Michigan 280	20.9	26	-	48.1	93	-	22.8	12	-	0.0		
Michigan Exp. 65-2003 A(2X)	21.0	-	-	44.5	-	-	42.1	-	-	0.0		
Northrup King PX 417 (3X)	21.5	-	-	28.1	-	-	43.3	-	-	0.0		
Pioneer 3854 (2X)	21.7	-	-	30.9	-	-	26.8	-	-	0.0		
Michigan Exp. 65-2003 (2X)	21.8	-	-	46.3	-	-	39.1	-	-	0.0		
Pioneer 3956 (2X)	21.8	-	-	28.1	-	-	26.5	-	-	0.0		
Northrup King PX 442 (3X)	22.3	-	-	27.5	-	-	16.7	-	-	0.0		
Pride R 129 (3X)	22.4	-	-	35.7	-	-	62.2	-	-	0.0		
Funk Bros. G 4170 (3X)	22.4	-	-	28.4	-	-	35.5	-	-	0.0		
P.A.G. SX 47 (2X)	22.4	-	-	40.5	-	-	40.0	-	-	0.0		
Michigan 300	22.4	27	27	41.0	80	75	28.4	16	15	0.0		
*Green Belt 41	22.7	27	26	48.5	85	74	46.4	26	22	0.0		
Funk Bros. G 43	22.7	-	-	28.7	-	-	43.3	-	-	0.0		
Pride R 118 (3X)	22.8	-	-	34.2	-	-	69.9	-	-	0.0		
Northrup King X 122 (2X)	22.9	-	-	24.1	-	-	25.3	-	-	0.0		
Green Belt 31	23.2	-	-	31.3	-	-	40.0	-	-	0.0		
Pioneer 388	23.2	-	-	40.4	-	-	38.2	-	-	0.0		
*P.A.G. SX 48 (2X)	23.9	-	-	49.3	-	-	59.2	-	-	0.0		

Table 13. - HURON COUNTY (Continued)

Hybrid	% Moisture			Bushels Per Acre			% Stalk Lodging			% Root Lodging		
	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.	3 Yrs.	1968	2 Yrs.	3 Yrs.
*Michigan 402-2X (2X)	23.9	29	28	48.2	86	82	34.1	19	14	0.0		
*Northrup King PX 446 (Sp)	23.9	29	-	50.5	87	-	54.5	27	-	0.0		
P.A.G. 45	23.9	29	28	29.4	72	67	38.2	19	16	0.0		
*Northrup King PX 22 (2X)	24.0	-	-	47.3	-	-	32.5	-	-	0.0		
*Michigan 400	24.0	29	28	49.3	86	80	10.5	6	5	0.0		
Haapala SX 205 (2X)	24.1	-	-	35.4	-	-	40.8	-	-	0.0		
Jacques 951	24.2	28	-	45.9	82	-	24.4	16	-	0.0		
Wolverine 46 A	24.3	29	29	35.1	79	70	19.4	10	10	0.0		
Funk Bros. G 4287 (3X)	24.4	-	-	33.2	-	-	29.0	-	-	0.0		
*Super Crost S 19 (2X)	24.6	-	-	50.4	-	-	31.1	-	-	0.0		
Teweles 232	24.7	-	-	29.5	-	-	30.4	-	-	0.0		
P.A.G. 38	24.7	-	-	43.2	-	-	39.7	-	-	0.0		
Pioneer 3911 (2X)	24.8	-	-	31.9	-	-	57.3	-	-	0.0		
Pioneer 3675	25.0	28	28	28.3	67	58	16.1	9	9	0.0		
Weather Master EP 30 (3X)	25.1	-	-	26.7	-	-	29.7	-	-	0.0		
DeKalb XL 306 (3X)	25.4	30	28	31.6	68	70	18.7	9	11	0.0		
Jacques 1051 E	25.6	-	-	40.9	-	-	17.2	-	-	0.0		
Funk Bros. G 4350 (2X)	26.2	30	-	28.4	80	-	23.1	12	-	0.0		
*DeKalb XL 15 (2X)	26.4	-	-	46.6	-	-	18.8	-	-	0.0		
Michigan 463-3X (3X)	26.4	31	30	38.9	86	82	24.7	12	10	0.0		
Green Belt 316	26.4	-	-	42.8	-	-	28.7	-	-	0.0		
Northrup King PX 480 (Sp)	26.5	30	29	34.4	84	74	40.4	21	22	0.0		
Funk Bros. G 17 A	26.5	30	29	36.2	81	77	27.9	16	14	0.0		
Michigan 550	26.6	32	31	37.6	80	77	9.6	7	5	0.0		
Green Belt SX 362 (2X)	26.7	31	-	41.6	93	-	36.3	18	-	0.0		





Table 14 – HURON COUNTY TRIAL (Continued)

	1968	1967	1966
Planted	May 1	May 2	May 4
Harvested	Sept. 12	Sept. 12	Sept. 19
Soil type	Brookston loam	Brookston loam	Brookston loam
Previous crop	Corn	Corn	Corn
Rows	30**	36**	36**
Population	19,300	18,100	17,500
Fertilizer	165-115-240	170-126-105	128-112-56
Soil test: P <sup>H</sup>	7.5	7.4	7.4
P	116 (very high)	83 (high)	63 (high)
K	295 (high)	289 (high)	186 (high)

Farm Cooperator: William McCrea, Bad Axe  
 Count Agricultural Agent: Lee Warschewsky, Bad Axe

Table 15.

Zone 3

**NORTH CENTRAL MICHIGAN  
 MONTCALM COUNTY TRIAL  
 Irrigated versus Not Irrigated  
 One Year – 1968**

Hybrid	% Bu. per Acre		% Stalk Lodg.		% Root Lodg.	
	Moisture Irrig.	Not Irrig.	Irrig.	Not Irrig.	Irrig.	Not Irrig.
Michigan 270	22.0	123.1	94.9	5.0	10.0	0.0
<sup>1,2</sup> Michigan Exp. 65-2003 (2X)	22.9	164.3	110.3	1.0	9.1	0.0
<sup>1,2</sup> Mich. Exp. 65-2003 A (2X)	23.0	163.0	109.2	0.0	8.6	0.0
<sup>1</sup> Michigan 280	23.1	152.8	101.5	4.4	10.6	0.0
Pioneer 3854 (2X)	25.2	110.7	81.2	0.0	9.7	0.0
<sup>1</sup> Northrup King PX 446 (2X)	25.4	153.6	91.0	0.9	4.0	0.0
Cowbell SX 24 (2X)	25.5	122.7	71.9	2.0	4.5	0.0
<sup>1,2</sup> Pioneer 3911 (2X)	25.5	156.8	110.4	0.0	7.5	0.0
Michigan 300	25.7	138.3	99.5	0.0	7.2	0.0
Jacques JX 952	25.7	106.6	90.3	1.9	1.0	0.0
Funk Bros. G 4287 (3X)	25.7	142.3	91.4	1.8	0.0	0.0
Michigan 250	25.7	144.3	99.4	4.2	7.5	0.0
Weather Master EPX-3P (2X)	25.9	116.9	81.3	0.0	3.3	0.0
Pioneer 388	25.9	99.8	77.6	4.1	3.5	1.0
Northrup King X19 (Sp)	26.0	125.4	97.8	0.9	4.0	0.0
Super Crost S19 (2X)	26.2	147.4	101.4	0.9	5.4	0.0
<sup>2</sup> Michigan 402-2X (2X)	26.3	149.5	111.1	1.0	7.1	0.0
Jacques 951 E	26.4	116.0	81.9	0.0	3.2	0.0
Teweles SXT 14 (2X)	26.6	107.4	70.2	0.0	8.1	1.1
DeKalb XL 304 (3X)	26.9	132.0	70.2	1.6	3.1	1.6
Michigan 400	26.9	142.5	96.8	2.0	8.1	1.0
Cowbell SX 95 (2X)	27.3	92.2	68.1	2.1	2.2	0.0
Blaney B 401	27.6	136.1	98.0	0.0	9.0	0.0
Northrup King PX 487 (3X)	27.8	108.7	77.2	4.2	13.9	0.0
<sup>1</sup> Michigan 463-3X (3X)	27.8	154.7	103.9	2.5	3.4	0.0
Northrup King KE 497	27.9	115.0	86.8	1.0	8.2	0.0
Funk Bros. G 17 A	27.9	149.0	98.8	0.9	5.1	0.0
Super Crost 163 (3X)	27.9	143.3	92.8	0.9	0.9	0.0
Northrup King PX 22 (2X)	28.0	128.0	91.8	0.0	3.2	0.0
Weather Master EP 30 (3X)	28.2	94.5	65.4	0.0	4.0	0.0
Blaney B 500 (2X)	28.4	111.7	91.0	0.9	5.4	0.0
DeKalb XL 315 (3X)	28.7	139.1	78.9	1.7	2.3	0.0
Teweles SXT 61 (3X)	28.7	149.4	107.2	0.0	2.9	1.8
<sup>1,2</sup> Michigan 500-2X (2X)	28.7	180.4	118.4	0.0	4.4	0.0
<sup>1</sup> Northrup King PX 525 (Sp)	29.0	153.0	101.5	0.8	3.1	0.0
<sup>1,2</sup> Northrup King PX 519 (Sp)	29.0	154.8	114.7	0.8	1.8	0.0
Blaney 6606 A (2X)	29.1	128.6	93.9	0.0	1.9	0.0
<sup>2</sup> Pioneer 3773 (2X)	29.1	143.0	116.9	1.7	0.9	0.0
Funk Bros. G 4222 (2X)	29.1	131.1	100.4	1.9	3.0	0.0
Weather Master EP 40 (3X)	29.4	126.6	96.9	0.0	0.0	0.0
Michigan 550	29.4	147.5	96.7	0.9	0.0	1.9
Blaney 6616 (3X)	29.5	123.1	89.5	1.1	2.2	0.0
Garno S 90X (2X)	29.5	122.2	89.3	0.0	0.0	0.0
Weather Master EP 20 (3X)	29.6	97.5	68.3	0.0	4.1	0.0
<sup>1,2</sup> Michigan 568-3X (3X)	29.7	166.4	118.5	1.0	0.0	0.0

Table 15 – MONTCALM COUNTY (Continued)

Hybrid	% Bu. per Acre		% Stalk Lodg.		% Root Lodg.	
	Moisture Irrig.	Not Irrig.	Irrig.	Not Irrig.	Irrig.	Not Irrig.
Teweles SXT 75 (3X)	30.1	127.0	91.4	0.0	0.0	0.0
<sup>1,2</sup> Pioneer 368	30.1	156.7	106.8	2.4	3.5	4.9
<sup>1,2</sup> DeKalb XL 45 (2X)	31.6	159.8	105.4	0.0	1.6	0.0
Average	27.2	136.1	96.0	1.1	4.3	0.3
Range	22.0	92.2	65.4	0.0	0.0	0.0
	to	to	to	to	to	to
	31.6	180.4	118.5	5.0	13.9	4.9
Least significant difference	1.1	14.2	8.9			

<sup>1</sup> Significantly better than average yield, irrigated.

<sup>2</sup> Significantly better than average yield, not irrigated.

Planted — May 4  
 Soil Type — Sandy loam  
 Plant Population — 19,600  
 Fertilizer — 236 — 190 — 190  
 Soil Test: pH = 6.2, P = 256 (very high), K = 220 (high).  
 Irrigation: 7.5" mid-July to September 7

Harvested — October 26  
 Previous Crop — Sorghum - sudan seeded to rye in fall  
 Rows — 30\*\*

Farm Cooperator: Theron Comden, M.S.U. Montcalm Experimental Farm, Entran  
 County Agricultural Agent: James Crosby, Stanton

Table 16.

Zone 3

**NORTH CENTRAL MICHIGAN  
 NEWAYGO COUNTY TRIAL**

**One, Two and Three Year Averages — 1968, 1967, 1966**

Hybrid	% Moisture			Bushels Per Acre	% Stalk Lodging	% Root Lodging
	1968	2 yrs.	3 yrs.			
Michigan 270	20.9	26	25	91.4	92	93
Michigan 250	21.0	27	26	92.2	95	93
*Michigan Exp. 65-2003 (2X)	21.6	—	—	114.2	—	—
Michigan Exp. 65-2003 A (2X)	21.6	—	—	110.6	—	—
Michigan 280	22.3	28	—	100.9	106	—
Northrup King PX 442 (3X)	22.6	—	—	88.2	—	—
Michigan 300	22.9	28	27	101.8	104	100
Pride R 118 (3X)	23.0	—	—	109.6	—	—
Northrup King PX 417 (3X)	23.2	—	—	73.0	—	—
P.A.G. SX 48 (2X)	23.8	—	—	95.2	—	—
P.A.G. SX 47 (2X)	23.8	—	—	82.3	—	—
Funk Bros. G 43	24.0	—	—	71.6	—	—
Funk Bros. G 4170 (3X)	24.3	28	—	72.3	71	—
Pioneer 3956 (2X)	25.1	—	—	109.2	—	—
P.A.G. 38	25.4	—	—	101.2	—	—
Michigan 400	25.4	31	29	110.0	103	102
*Michigan 402-2X (2X)	25.7	—	—	121.0	—	—
Funk Bros. G 10 A	25.8	30	30	92.8	103	104
Pioneer 3854 (2X)	25.9	30	28	80.4	92	90
Northrup King PX 446 (Sp)	25.9	30	—	89.3	96	—
Tomco 2600-2X	26.0	—	—	89.8	—	—
Michigan 463-3X (3X)	26.0	32	—	106.3	111	—
Teweles 263	26.1	—	—	79.4	—	—
*Pioneer 3911 (2X)	26.3	31	—	127.0	114	—
*Cowbell SX 102 (2X)	26.3	—	—	128.1	—	—
DeKalb XL 306 (3X)	26.3	31	29	98.8	105	102
Funk Bros. G 4287 (3X)	26.5	31	29	107.4	110	112
Northrup King PX 22 (2X)	26.7	—	—	100.5	—	—
Funk Bros. G 4350 (2X)	26.9	34	32	85.8	94	95
Pioneer 3675	27.2	32	30	93.7	91	99
Northrup King PX 480 (Sp)	27.2	34	32	103.5	110	103
Pioneer 385	27.6	32	30	93.9	103	103
DeKalb XL 15 (2X)	27.8	31	30	92.8	96	99
Tomco 144	27.9	34	—	91.9	91	—
Tomco 180	28.1	32	—	78.5	89	—

**Table 16 – NEWAYGO COUNTY TRIAL (Continued)**

Hybrid	% Moisture		Bushels Per Acre		% Stalk Lodging		% Root Lodging	
	2	3	2	3	2	3	2	3
	1968	yrs. yrs	1968	yrs. yrs.	1968	yrs.yrs.	1968	yrs.yrs.
Funk Bros. G 17 A	28.3	33 32	88.0	92 93	0.0	0 0	0.0	
DeKalb XL 315 (3X)	28.5	34 32	104.1	99 98	0.6	0 3	0.0	
Northrup King KE 497	28.9	— —	100.7	— —	0.0	— —	0.0	
Tomco 160	28.9	— —	91.5	— —	1.5	— —	0.0	
*Northrup King PX 525 (Sp)	29.0	— —	129.4	— —	1.2	— —	0.0	
*Pioneer 3773 (2X)	29.6	35 —	135.4	114 —	0.0	0 —	0.0	
*Michigan 500-2X (2X)	29.9	35 33	133.0	119 119	0.0	0 0	0.0	
Michigan 550	30.9	35 33	109.1	105 113	0.0	0 1	0.0	
Average	26.1	31 30	102.2	101 101	1.2	1 2	0.0	
Range	20.9 to 30.9	26 to 35	25 to 135.4	71 to 119	90 to 119	0.0 to 4.8	0 to 2	0 to 8
Least significant difference	0.9	1 1	11.2	5 4				

\*Significantly better than average yield in 1968.

	1968	1967	1966
Planted	May 10	May 21	May 19
Harvested	Oct. 29	Nov. 8	Nov. 4
Soil type	Selkirk loam	Selkirk loam	Selkirk loam
Previous crop	Corn	Corn	Corn
Population	18,800	17,500	16,700
Rows	30''	36''	36''
Fertilizer	18-72-36	100-84-42	121-84-42
Soil test: pH	7.2	7.3	7.2
P	28 (medium)	62 (high)	23 (medium)
K	179 (medium)	187 (high)	108 (low)
Farm Cooperator:	Ivan Norris, Hesperia		
County Agricultural Agent:	Lane Rushmore, Fremont		

**Table 17. Zone 4**  
**NORTHERN MICHIGAN**  
**GRAND TRAVERSE COUNTY**  
 (1966 Trial not harvested for grain yields)

Hybrid	% Moisture		Bushels Per Acre		% Stalk Lodging		% Root Lodging	
	2	3	2	3	2	3	2	3
	1968	yrs. yrs	1968	yrs. yrs.	1968	yrs.yrs.	1968	yrs.yrs.
Michigan 200	22.0	25 29	66.3	70 65	12.3	7 8	0.0	
A.E.S. 202	22.5	25 28	61.9	63 57	16.1	8 21	0.0	
Funk Bros. G 43	23.7	— —	61.8	— —	17.4	— —	0.0	
Northrup King PX 417 (3X)	23.9	— —	62.5	— —	10.3	— —	0.0	
Michigan 270	23.9	27 32	73.8	70 63	18.3	9 17	0.0	
Pride R 118 (3X)	23.9	— —	63.6	— —	16.1	— —	0.0	
Michigan 250	24.3	27 —	76.1	72 —	4.7	4 —	0.0	
DeKalb 45	24.8	28 33	74.7	70 63	7.9	4 6	0.0	
*Michigan Exp. 65-2003 (2X)	25.0	— —	96.8	— —	1.8	— —	0.0	
*Michigan Exp. 65-2003A(2X)	25.1	— —	89.4	— —	2.5	— —	0.0	
Northrup King KE 435	25.7	27 32	64.3	60 53	41.7	24 26	0.0	
Pioneer 3959 (3X)	25.8	— —	64.0	— —	6.4	— —	0.0	
Michigan 280	25.8	28 —	76.5	75 —	3.7	2 —	0.0	
Northrup King PX 442 (3X)	25.8	— —	77.2	— —	3.7	— —	0.0	
Pioneer 3956 (2X)	26.2	28 —	81.0	79 —	1.8	1 —	0.0	
Michigan 300	26.2	29 34	72.9	74 66	8.7	5 13	0.0	
Funk Bros. G 4170 (3X)	27.2	29 —	58.6	59 —	17.0	9 —	1.4	
Northrup King PX 446	27.6	29 —	72.4	68 —	3.6	2 —	0.0	
Pride 232	29.7	33 —	64.4	65 —	5.5	3 —	0.0	
Haapala SX 420 (3X)	33.7	33 —	63.1	56 —	0.6	1 —	0.0	
Average	25.9	28 31	74.0	71 61	8.7	5 15	0.1	
Range	22.0 to 33.7	25 to 38	28 to 89.4	56 to 79	53 to 66	0.6 to 41.7	1 to 26	0.0 to 1.4
Least significant difference	1.1	1 1	8.8	5 4				

**Table 17 – GRAND TRAVERSE COUNTY TRIAL (Cont.)**

\*Significantly better than average yield in 1968

	1968	1967	1966
Planted	May 13	May 23	May 14
Harvested	Nov. 4	Oct. 25	Nov. 16
Soil type	Emmett sandy loam	Emmett Sandy loam	Emmett sandy loam
Previous crop	Corn	Corn	Corn
Population	17,800	18,000	17,000
Rows	38''	38''	38''
Fertilizer	149-82-162	81-81-81	120-120-120
Soil test: pH	6.2	5.9	6.8
P	67 (high)	62 (high)	49 (high)
K	139 (medium)	171 (medium)	113 (low)
Farm Cooperator:	Karl Wagner, Grawn		
County Agricultural Agent:	George McManus, Traverse City		

**Table 18. Zone 4**  
**NORTHERN MICHIGAN**  
**GRAIN – ALPENA COUNTY TRIAL**  
 One and Two Year Averages – 1968 and 1967

Hybrid	% Moisture		Bushels Per Acre		% Stalk Lodging		% Root Lodging	
	1968	2 yrs.	1968	2 yrs.	1968	2 yrs.	1968	2 yrs.
Trojan TX 68	26.9	—	76.0	—	0.0	—	0.0	
*Michigan 200	29.3	32	129.8	105	0.0	2	0.0	
A.E.S. 202	30.0	33	124.7	101	0.0	1	0.0	
Northrup King PX 417 (3X)	30.0	—	106.5	—	0.0	—	0.0	
Pioneer PXE-1	30.0	—	32.6 <sup>1</sup>	—	0.0	—	0.0	
Seneca SR 155	31.1	34	109.4	89	0.0	0	0.0	
Seneca XX 155	32.0	34	118.8	94	0.0	0	0.0	
Weather Master EP 10 (3X)	33.3	36	118.8	98	0.0	1	0.0	
Funk Bros. G 43	34.1	36	122.8	99	0.0	1	0.0	
*Northrup King PX 446 (Sp)	34.9	38	138.2	106	0.0	2	0.0	
DeKalb XL 301 (3X)	34.9	—	99.8	—	0.0	—	0.0	
Michigan 270	35.6	39	125.7	99	0.0	1	0.0	
Pride 137	36.0	39	137.4	106	0.0	2	0.0	
*Pioneer 3956 (2X)	36.1	37	140.2	109	0.0	1	0.0	
DeKalb XT 138	36.7	41	112.6	84	0.0	2	0.0	
*Michigan 280	36.8	41	139.4	106	0.0	0	0.0	
Pioneer 3959 (3X)	36.9	—	122.0	—	0.0	—	0.0	
Northrup King PX 442 (3X)	36.9	—	121.8	—	0.0	—	0.0	
Michigan 250	37.0	40	125.8	99	0.0	0	0.0	
Funk Bros. G 10 A	39.6	41	119.4	98	0.0	1	0.0	
Average	34.6	37	116.2	99	0.0	1	0.0	
Range	26.9 to 39.6	32 to 41	32.6 to 140.2	84 to 109	0 to 2	0 to 2		
Least significant difference	1.8	5	10.7	4				

\*Significantly better than average yield in 1968.

<sup>1</sup>Damaged by racoons.

	1968	1967
Planted	May 21	May 17
Harvested	Oct. 17	Nov. 7
Soil type	Onaway loam	Onaway sandy loam
Previous crop	Wheat	Beans
Population	21,300	17,200
Rows	28''	28''
Fertilizer	120-72-72	30-30-30
Farm Cooperators:	1968 = William Bartow, Alpena; 1967 = A.H. Nickels, Alpena	
County Agricultural Agent:	A.H. Nickels, Alpena	

Table 19 **NORTHERN MICHIGAN** Zone 4  
SILAGE - ALPENA COUNTY TRIAL  
One, Two and Three Year Averages - 1968, 1967, 1966

Hybrid	% Moisture in Ears		Tons Per Acre				% Ears in Dry Weight	
	2	3	Green wt.		Dry wt.		2	3
	1968	1967	1968	1967	1968	1967	1968	1967
Trojan TX 68	42.3	-	17.1	-	5.6	-	53.8	-
Pioneer PXE 1	42.7	-	13.6	-	4.3 <sup>1</sup>	-	42.5	-
A.E.S. 202	47.0	48	28.2	19.5	14.9	8.2	6.1	4.9
Michigan 200	47.8	49	28.7	20.1	15.7	8.8	6.7	5.5
Northrup King PX417 (3X)	49.9	-	25.0	-	7.7	-	52.0	-
Seneca SR 155	50.9	52	26.0	18.2	7.4	5.5	43.8	37
Seneca XX 155	51.3	52	27.0	20.2	8.1	6.4	41.6	37
Weather Master EP10 (3X)	52.1	-	27.0	-	7.2	-	46.8	-
Michigan 270	53.0	54	28.7	21.9	16.2	8.0	6.3	5.1
Pride 137	56.1	57	32.0	22.2	8.7	6.5	45.5	39
Michigan 250	56.1	57	33.2	22.4	18.3	8.9	6.4	5.6
Michigan 280	56.2	56	35.8	24.9	9.1	7.0	50.5	45
De Kalb XT 138	56.8	55	31.5	20.5	16.3	8.1	5.8	4.9
Funk Bros. G 43	57.6	55	30.2	20.2	15.8	7.6	5.6	4.7
De Kalb XL 301 (3X)	57.5	-	28.4	-	7.2	-	44.5	-
Northrup King PX 446 (Sp)	57.6	59	35.4	23.7	9.3	6.7	41.3	35
Northrup King PX 442 (3X)	57.9	-	30.2	-	8.1	-	45.8	-
Pioneer 3956 (2X)	58.1	60	34.3	23.0	9.2	6.3	43.1	43
Pioneer 3959 (3X)	58.5	-	34.7	-	8.8	-	42.0	-
Funk Bros. G 10 A	62.4	62	33.3	23.2	18.7	7.9	6.0	5.3
Average	53.8	55	29.0	21.1	16.6	7.9	6.1	5.2
Range	42.3	48	13.6	16.8	14.9	4.3	4.8	4.7
Least significant difference	2.1	1.5	1	1.5	.9	.6	.5	.3

<sup>1</sup>Damaged by racoons.

	1968	1967	1966
Planted	May 21	May 17	May 11
Harvested	Sept. 18	Sept. 13	Sept. 21
Soil Type	Onaway loam	Onaway sandy loam	Onaway loam
Previous crop	Wheat	loam	
Rows	28''	28''	38''
Population	21,100	17,200	14,000
Fertilizer	120-72-72	30-30-30	30-60-30
Farm Cooperators:	(1968) William Bartow, Alpena;	(1967 and 1966) A.H. Nickel, Alpena	
County Agricultural Agent:	A.H. Nickel, Alpena		

Table 20 **NORTHERN MICHIGAN** Zone 4  
SILAGE - ALGER COUNTY TRIAL  
One, Two and Three Year Averages - 1968, 1967, 1966

Hybrid	% Moisture in Ears		Tons Per Acre				% Ears in Dry Weight	
	2	3	Green wt.		Dry wt.		2	3
	1968	1967	1968	1967	1968	1967	1968	1967
Northrup King PX 417 (3X)	77.3	-	17.9	-	3.4	-	22.5	-
Funk Bros. G 2 A	77.5	-	16.4	-	3.6	-	25.2	-
Michigan 200	78.1	75	20.1	15.3	13.3	3.8	3.3	3.4
Midland Co-op M480	78.2	-	19.9	-	3.4	-	21.8	-
Northrup King PX 480 (Sp)	78.6	81	24.5	17.5	3.4	3.1	19.9	16
Midland Co-op M490	78.7	-	23.0	-	3.9	-	18.5	-
Michigan 280	78.8	81	25.3	18.4	16.4	3.6	3.2	3.9
Pioneer 3956 (2X)	78.8	80	23.3	16.8	3.3	3.0	24.6	22
Pioneer 3959 (3X)	78.8	-	20.8	-	3.2	-	23.3	-
Northrup King PX 442 (3X)	79.1	-	23.5	-	3.6	-	18.9	-
A.E.S. 202	79.1	78	20.6	15.3	13.7	3.5	3.7	4.0
Wisconsin 263	79.2	78	22.2	16.5	13.8	3.9	3.4	3.4
Teweles 201	79.2	-	22.2	-	3.8	-	21.3	-
Northrup King KC 3	79.5	77	19.1	15.0	13.3	3.5	3.3	3.5
Michigan 250	79.5	80	21.2	15.5	14.3	3.0	2.8	3.6
Michigan 270	79.6	80	19.4	15.1	13.8	2.7	2.7	3.4
Trojan TX 68	79.6	-	12.2	-	3.2	-	20.3	-
Wisconsin 273	79.8	78	21.0	16.0	14.1	3.3	3.0	3.4
Wisconsin 243	79.8	78	19.2	14.4	13.1	3.3	2.9	3.4
De Kalb 29	80.0	75	21.7	15.1	13.2	4.1	3.3	3.6
Northrup King PX 446 (Sp)	80.2	79	23.1	17.0	3.3	3.2	19.8	19
Pioneer PXE-1	80.3	68	14.9	11.7	4.0	3.5	18.4	33
Midland Co-op M 485	80.8	-	20.1	-	3.7	-	17.8	-
Average	79.1	78	21.1	15.7	13.9	3.5	3.2	3.6
Range	77.3	68	63	12.2	11.7	13.1	2.7	2.7
Least significant difference	3.8	2.5	2	1.6	0.9	0.6	4	0.3

	1968	1967	1966
Planted	June 13	May 29	May 23
Harvested	Sept. 27	Sept. 21-22	Oct. 18
Soil type	Chatham stoney loam	Chatham stoney loam	Chatham stoney loam
Previous crop	Corn		
Population	16,900	16,200	15,900
Fertilizer	78-72-72	70-78-78	74-96-48
Cooperator:	Dr. Don Reid, Michigan State University, Chatham		

