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Michigan Corn Production Hybrids Compared

Michigan State University Extension Service

Kurt D. Thelen, Keith Dysinger, William D. Widdicombe, Crop and Soil Science,  
Michael Allan, David Main, Animal Science, Jeff Andresen, Geography

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# **CORN HYBRIDS COMPARED IN THE 2000 SEASON**



**EXTENSION BULLETIN E-431 DECEMBER 2000**

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**ON THE COVER:** Photo of new two row corn forage harvester built in the Michigan State University Farm shop. Construction was completed during the summer of 2000. Many thanks to Bill Berning for his help in the construction.

# 2000 GRAIN PERFORMANCE TRIALS

## Introduction

Hybrid corn trials are conducted each year by the Department of Crop and Soil Sciences in cooperation with MSU Extension, seed corn companies, and farmers.

## Entries

Each year seed companies are invited to enter hybrids in the trials. A fee is charged to cover expenses.

The indexes for grain and silage present a list of all hybrids planted in the 2000 trials. At 12 grain and 9 silage locations, 319 hybrids from 32 seed companies (35 Brand names) were tested for yield as 1,221 individual entries. Company names used in association with hybrid numbers refer to the brand. The numbers are the companies designations.

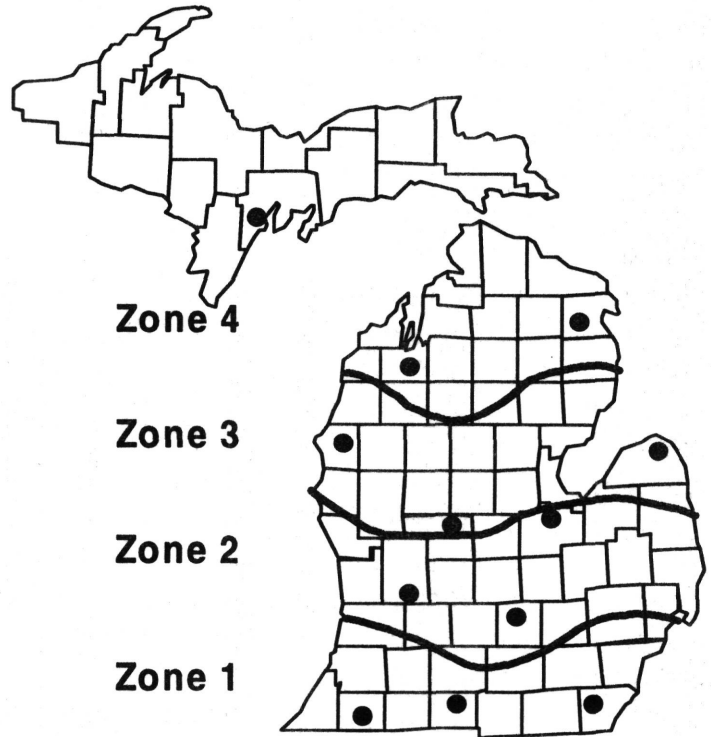
## Methods

Grain trials contained 247 hybrids from 32 companies consisting of 990 individual entries. Three trial locations were planted in each of four maturity zones. These zones are based on available growing degree-day units established from long-term weather records. Hybrids entered in each zone are all tested in the three designated locations. Entries for zones 1, 2, and 3 are divided into two maturity groups (early and late) based on maturity ratings provided by the seed companies. Zone 4 tests all hybrids in one group.

Four-row plots were used at all grain locations. The two center rows were harvested for yield. Plots were 22-feet long with a 30-inch row spacing.

Experimental design, data acquisition, analysis of variance, and data summarization were facilitated in part by ADaM, a software package developed jointly by MSU, CIMMYT (Mexico), and the Scottish Agricultural Statistics Service. The field research layout is a four-replication, lattice design. A hybrid's performance is reported as the adjusted mean averaged together from four replicated plots.

All hybrids were grown under similar conditions at each location. They were grown in farmers' fields with equal fertilizer, population, date of planting, and other management practices. Trials in Branch,



2000 GRAIN TRIAL LOCATIONS

Cass, Montcalm, and Mason counties were irrigated. In the field, hybrids were identified only by a plot number to assure unbiased comparisons.

Stand Counts were recorded in June. Plots with stand counts higher than the desired population were thinned at this time. Desired population rates are listed in Table B (grain) and Table C (silage). Lodging measurements were made at harvest, counting all plants broken below the ear. Plots were harvested mechanically for both grain and silage. Moisture content and field weight were measured by a GrainGage™, a HarvestMaster System™ mounted on our plot combine using the grain sample provided. Grain yields are reported at a standard 15.5 percent moisture. Test weights are reported at harvest moisture. Automated test weight equipment loses some accuracy as harvest moistures increase. Test weight values should be used to determine relative rank and not as a precise weight.

Replicated grain samples were collected from one location in each zone and were tested for protein, starch, and oil content. The results are presented in the table presenting three year yield results.

## Growing Conditions

All yield trials were planted between April 28, and May 24, and harvested between Oct. 16, and Nov. 1. Mild weather and dry field conditions made for excellent planting conditions in the early season. Rainy conditions throughout southern Michigan starting the second week of May and continuing into the third week kept many farmers out of the fields until late May. This resulted in significant acreage to be planted late. This late planted corn lagged well behind the earlier planted corn throughout the growing season. Cooler than normal conditions in July and August made it difficult for many fields to reach full maturity in September. This resulted in higher moisture and lower test weights than have been experienced in recent years. Although some late planted corn still remains in the field throughout Michigan, excellent weather during the normal harvest season allowed for most of the mature corn to come off in a timely manner. Grain moisture and test weight in general were not as bad as early expectations might have dictated. Yields were better than expected around the state except for some locations in northern Michigan that lacked sufficient rainfall throughout the whole growing season.

## How to Use This Bulletin

Tables have hybrids listed alphabetically. One-, two-, and three-year averages (2000, 1999, 1998) averaged over three locations are presented for all hybrids wherever data are available. Results for individual locations in 2000 are also included in the same table. One-year single site results are less reliable than two- or three-year and multiple location averages and should be interpreted with more caution. Confidence in corn performance data increases with the number of years and locations of testing. For complete two- and three-year single site data, please visit our web site at:

**[www.css.msu.edu/varietytrials/](http://www.css.msu.edu/varietytrials/)**

The tables report the following information about the hybrids tested:

1. Moisture content at harvest.
2. Test weight at harvest moisture.
3. Yield (in bushels) of shelled corn at 15.5 percent moisture.

4. Percent of stalk lodging (plants broken below the ear at harvest).
5. Percent stand of target population
6. Percent protein, starch, and oil content

The results shown are the average of four replications grown in close proximity to each other. Two or more plots of the same hybrid in the same field may produce somewhat different results because of uncontrolled variability in the soil and other environmental factors. Replication and randomization of the entries are two methods used to reduce these errors. Because these methods do not eliminate all of these variables, the magnitude of difference necessary for statistical significance has been calculated for yield, moisture content, and test weight. The value calculated as the "least significant difference" or "LSD" is the amount that an individual hybrid would have to differ from another hybrid in the same test to be significantly different from that hybrid.

Hybrids which are not significantly different from the highest yielding hybrid are marked with an asterisk (\*) in each table. Other agronomic information relative to each trial is given in Tables B and C. Fertilizer amounts are shown as 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 page 4 shows the locations of the grain trials, and divides Michigan into four generalized maturity zones. 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.

In the selection of a hybrid there is no real substitute for observing individual characteristics while plants are growing. The best time to compare plants is usually in late August or early September as they approach maturity. Each year, at a limited number of locations, demonstration plantings of each hybrid are planted at the front of the test field. In 2000, three locations had a scheduled field day plot tour, and the public was invited to view the hybrids. Examining plant and ear characteristics can help in selecting hybrids suitable for your production system. Yield results are not taken from the demonstration plot.



## Planting Rate

The number of seeds sown per acre in Michigan has increased steadily over the past several years. In general, modern corn hybrids can withstand the stress of higher plant populations better than earlier hybrids. However, increased planting rates are not a guarantee of increased yield. Check with your seed dealer for information on which hybrids perform better at the higher populations when grown on your soil type.

## Maturity

Early-maturing hybrids are generally lower in moisture content than later-maturing hybrids at harvest. Differences among hybrids in rate of drydown in the field also affect moisture content at harvest but usually do not greatly disturb the relative maturity ratings as determined by moisture content.

One percent more moisture at harvest reflects a delay in maturity of about two days. Another estimate of corn maturity is when a black layer of cells forms at the base of the kernel. This black layer is an indication of the end of active growth processes. At this time, kernel moisture will be between 32 and 35 percent.

## For Grain

When selecting a hybrid, yield should not be the only consideration. Identifying hybrids with lower moisture but above average yield will often have higher net returns than top yielding hybrids with higher moisture. One point higher moisture requires about two more bushels in yield to breakeven. It is often better to choose earlier hybrids (below average moisture content) than later hybrids for grain. Data in the tables show that good yields do not totally depend on later maturity.

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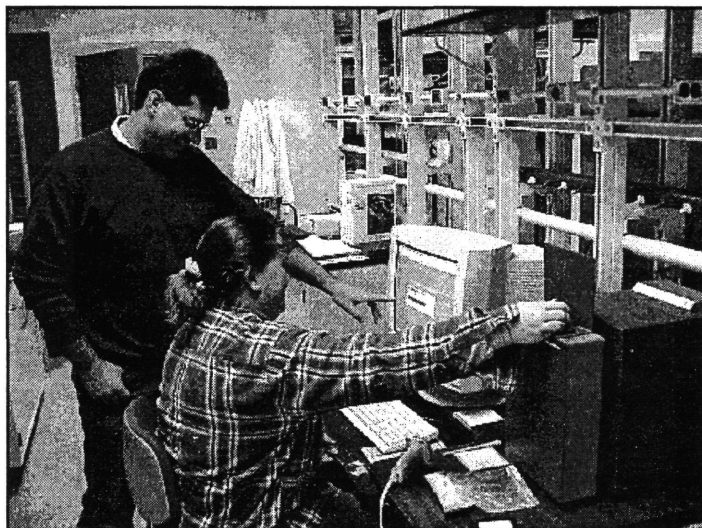
## NEW FOR 2000

### Near Infrared Reflectance Analyzer

This year a new near infrared reflectance system analyzer (NIR) was purchased to analyze grain and forage samples for quality parameters. The instrumentation was purchased with funds from the Corn Marketing Program of Michigan, Michigan Soybean Promotion Committee, Michigan Hay and Grazing Council, MSU Department of Crop and Soil Sciences, and Project GREEN, a state legislative initiative. The unit is housed in the Plant and Soil Sciences Building at MSU and will be used in the corn, soybean, and forage research programs. It is estimated that a total of 15,000 research and variety testing program samples will be analyzed annually with the equipment.

This technology provides a rapid, non-consumptive, and accurate technique to determine crude protein, fat, neutral detergent fiber, acid detergent fiber, calcium, phosphorus, magnesium, starch, oil, and other analytical parameters in whole grain or ground forage samples. Near infrared spectral analyses involves irradiating the sample with light in the near infrared range (1100 to 2500 nm). The illuminated sample absorbs light energy in the near infrared spectrum proportional to specific chemical and physical properties. The reflected energy is measured and correlated statistically with established grain or forage quality levels.

In this bulletin, the percent protein, oil, and starch for corn grain samples were determined using NIR. For corn silage, NIR analytical results are augmented with results from in-vitro analytical techniques, which rely on actual bovine rumen fluids to digest samples prior to chemical analyses. The in-vitro technique is described in greater detail in the corn silage section of this bulletin. Together, these two analytical techniques provide a comprehensive comparison of silage quality parameters between corn hybrids.



**Picture:** Technicians at MSU analyze corn silage samples for quality using the new NIR spectrometer



### **Farm advantages of early-maturing hybrids are:**

- They usually mature before killing frost.
- Adapted early hybrids can generally yield as much as late hybrids in most areas of Michigan.
- Early hybrids with lower moisture content at harvest reduce drying time and market discounts for moisture.
- Test weights are generally higher resulting in reduced market discounts.
- Mature, dry corn makes a superior feed grain when used in swine or poultry rations.
- Harvest can take place earlier in the fall when weather conditions are most favorable. Early harvest may reduce corn losses resulting from broken stalks and dropped ears.
- Fall tillage of corn stubble can be more timely on land not subject to erosion.

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## **2000 GROWING SEASON WEATHER SUMMARY**

The 2000 growing season will be best characterized as a season of weather contrasts, both in terms of temperature and of precipitation. Lack of moisture was a major concern early in the season following a prolonged period of below normal precipitation over much of the state since the fall of 1998. By climatological standards, a drier than normal pattern this long is extremely unusual in Michigan and at least temporarily reversed a long term regional trend of increasing precipitation (since the 1930's). As a result, soil moisture reserves across the state in April were at their lowest levels since the spring of 1988 and surface/subsurface water levels had fallen well below historical normals (e.g. Great Lakes levels fell to the lowest levels since 1965). The state was on the northern fringes of a broad area of abnormal dryness stretching from the central Great Plains eastward into the Ohio Valley. In addition to the dry conditions, the early spring season was abnormally mild (among the 5 warmest February/March periods of the past century), bringing overwintering crops out of dormancy early and warming soils enough to support early spring planting.

With abnormally dry soils across large sections of the central U.S. and moderate to strong La Nina conditions in the equatorial Pacific, long lead outlooks at the time called for a warmer and drier than normal summer. Unexpectedly, an upper air troughing pattern set up across the Upper Midwest in May and persisted for several weeks. This pattern brought a series of low pressure centers and associated frontal boundaries through the region which led to several rounds of heavy rain. Rainfall totals across Michigan for the month of May alone ranged from less than 3 inches in northern sections of the state to more than 8 inches (more than

200 percent of normal rates) at some southern locations. The precipitation eased long term dryness but led to lengthy planting and fieldwork delays. Some locations exceeded all-time records for maximum monthly precipitation totals.

A shift of the jet stream to a more northwest to southeast configuration across the Great Lakes led to a temperature pattern that continued into August. Mean temperatures for July generally ranged from 1-5 degrees F below normal, leading to the coolest July and June-August period since the summer of 1992. Scattered frost and freezing temperatures were reported across the Upper and northern Lower Peninsulas on the July 19-20, breaking records at some locations for an event so late in the season. By mid-summer, growing degree day accumulations had fallen back (from above normal levels earlier in the season) to below normal levels, slowing crop growth and development, especially in eastern sections of the state.

A return to an upper air ridging pattern across the Midwest during late September and much of October brought warmer, drier weather, which when combined with a later than normal first killing freeze in the fall allowed many crops to be slowed by earlier cool temperatures to reach maturity. Overall, for the 5-month May-September period, mean temperatures and growing degree day accumulations ranged from near- to below-normal statewide. Precipitation was highly variable, ranging from below normal totals in northern sections of the state to much above normal levels in the south.

*Jeff Andresen*

*Agricultural Meteorologist/Extension Specialist,*

*Dept. of Geography*

*Michigan State University*

TABLE A

## 2000 GROWING SEASON SUMMARY OF TEMPERATURE, PRECIPITATION, AND GROWING-DEGREE-DAY

COUNTY		MAY			JUNE			JULY			AUGUST			SEPTEMBER			SEASON		
		OBS	NORM	DEV	OBS	NORM	DEV	OBS	NORM	DEV	OBS	NORM	DEV	OBS	NORM	DEV	OBS	NORM	DEV
MONROE Zone 1	TEMP	62.9	58.3	4.6	69.7	67.8	1.9	69.9	71.7	-1.8	69.8	69.9	-0.1	62.7	62.6	0.1	67.0	66.1	0.9
	PPT	6.89	3.04	3.85	4.95	3.30	1.65	1.80	3.73	-1.93	3.19	3.20	-0.01	1.79	2.62	-0.83	18.62	15.89	2.73
	GDD	453	353	100	600	542	58	620	658	-38	621	616	5	423	432	-9	2717	2601	116
ST. JOSEPH (Branch & Cass)	TEMP	59.8	59.2	0.6	67.5	68.4	-0.9	68.7	71.9	-3.2	69.7	70.1	-0.4	62.4	63.3	-0.9	65.6	66.6	-1.0
	PPT	6.98	3.12	3.86	6.02	3.95	2.07	5.92	3.79	2.13	1.68	3.16	-1.48	4.15	3.01	1.14	24.75	17.03	7.72
	GDD	377	381	-4	547	564	-17	589	670	-81	621	628	-7	444	454	-10	2578	2697	-119
KENT Zone 2	TEMP	60.2	57.4	2.8	66.9	67.1	-0.2	68.7	71.2	-2.5	69.3	69.5	-0.2	61.6	61.9	-0.3	65.3	65.4	-0.1
	PPT	8.65	2.86	5.79	4.58	3.68	0.90	3.88	2.95	0.93	2.29	3.14	-0.85	3.34	3.24	0.10	22.74	15.87	6.87
	GDD	364	335	29	519	530	-11	587	654	-67	608	610	-2	402	412	-10	2480	2541	-61
INGHAM	TEMP	60.1	57.5	2.6	67.5	67.0	0.5	68.0	70.7	-2.7	68.8	69.0	-0.2	60.6	62.0	-1.4	65.0	65.2	-0.2
	PPT	5.64	2.73	2.91	3.68	3.54	0.14	3.90	3.02	0.88	4.03	3.12	0.91	3.91	2.50	1.41	21.16	14.91	6.25
	GDD	379	338	41	544	530	14	568	640	-72	598	598	0	392	418	-26	2481	2524	-43
SAGINAW	TEMP	59.8	58.6	1.2	67.8	68.2	-0.4	68.5	72.1	-3.6	68.1	70.2	-2.1	60.5	62.9	-2.4	64.9	66.4	-1.5
	PPT	6.05	2.49	3.56	1.55	3.09	-1.54	1.77	2.83	-1.06	2.41	3.29	-0.88	3.34	2.76	0.58	15.12	14.46	0.66
	GDD	350	367	-17	543	555	-12	581	670	-89	574	623	-49	375	438	-63	2423	2653	-230
HURON Zone 3	TEMP	56.7	55.2	1.5	65.4	64.9	0.5	66.1	69.3	-3.2	66.2	67.8	-1.6	58.8	61.0	-2.2	62.6	63.6	-1.0
	PPT	8.36	2.58	5.78	4.97	2.88	2.09	4.58	2.93	1.65	3.94	3.01	0.93	3.75	2.67	1.08	25.60	14.07	11.53
	GDD	303	298	5	474	479	-5	512	602	-90	517	569	-52	336	387	-51	2142	2335	-193
MONTCALM	TEMP	59.2	57.7	1.5	65.7	67.1	-1.4	66.9	71.0	-4.1	67.9	69.3	-1.4	59.7	61.6	-1.9	63.9	65.3	-1.5
	PPT	6.46	2.88	3.58	4.63	3.43	1.20	3.79	2.50	1.29	5.65	3.84	1.81	5.25	3.12	2.13	25.78	15.77	10.01
	GDD	357	351	6	492	536	-44	537	646	-109	571	603	-32	365	414	-49	2322	2550	-228
MASON	TEMP	57.7	54.4	3.3	65.9	63.6	2.3	68.5	68.5	0.0	68.2	67.2	1.0	61.0	60.2	0.8	64.3	62.8	1.5
	PPT	6.05	2.48	3.57	1.44	2.93	-1.49	5.19	2.18	3.01	2.36	3.79	-1.43	4.26	3.25	1.01	19.30	14.63	4.67
	GDD	314	273	41	491	450	41	588	587	1	579	552	27	392	365	27	2364	2227	137
ALPENA Zone 4	TEMP	55.1	52.0	3.1	61.5	61.7	-0.2	65.1	66.6	-1.5	64.5	64.9	-0.4	57.8	57.2	0.6	60.8	60.5	0.3
	PPT	3.68	2.78	0.90	3.10	3.12	-0.02	1.23	3.11	-1.88	1.40	3.23	-1.83	3.43	3.08	0.35	12.84	15.32	-2.48
	GDD	284	251	33	382	413	-31	496	534	-38	483	496	-13	335	317	18	1980	2011	-31
GRAND TRAVERSE	TEMP	56.9	53.5	3.4	65.0	63.7	1.3	67.6	68.8	-1.2	67.1	67.3	-0.2	60.5	59.3	1.2	63.4	62.5	0.9
	PPT	2.79	2.48	0.31	3.20	3.15	0.05	2.44	2.88	-0.44	2.67	2.93	-0.26	2.98	3.60	-0.62	14.08	15.04	-0.96
	GDD	307	273	34	475	454	21	565	587	-22	547	552	-5	377	348	29	2271	2214	57
MENOMINEE (Delta)	TEMP	55.2	53.6	1.6	61.1	62.7	-1.6	65.0	67.4	-2.4	65.3	65.5	-0.2	56.4	57.0	-0.6	60.6	61.2	-0.6
	PPT	2.20	3.57	-1.37	3.60	3.72	-0.12	4.96	3.63	1.33	1.40	3.86	-2.46	3.20	3.60	-0.40	15.36	18.38	-3.02
	GDD	307	285	22	394	438	-44	509	559	-50	511	513	-2	345	319	26	2066	2114	-48

TEMP = Mean temperature (°F)

PPT = Precipitation (inches)

GDD = Growing Degree Days calculated at base 50°F, with 50°F and 86°F cutoffs

OBS = Totals observed in 2000

NORM = Normals calculated over 30 year period (1951-1980)

DEV = Deviation of observed from normal

**TABLE B****2000 AGRONOMIC TABLE FOR GRAIN TRIAL LOCATIONS**

COUNTY		PLANTING DATES	HARVEST DATES	PREVIOUS CROP	PLANTING RATE	AVERAGE STAND	FERTILIZER
MONROE	<b>Zone 1</b>	May 8	Oct. 11	Soybeans	28,512	26,801	193 - 48 - 168
BRANCH		April 28	Sept. 16	Corn	28,512	26,374	197 - 0 - 0
CASS		April 28	Oct. 16	Corn	28,512	25,512	730 - 30 - 124
KENT	<b>Zone 2</b>	May 2	Oct. 19	Corn	28,512	26,088	203 - 41 - 41
INGHAM		May 6	Oct. 26	Soybeans	28,512	26,659	194 - 65 - 65
SAGINAW		May 3	Oct. 23	Dry beans	28,512	26,801	188 - 0 - 0
HURON	<b>Zone 3</b>	May 3	Oct. 23	Corn	28,512	26,659	172 - 51 - 51
MONTCALM		May 15	Oct. 30	Potatoes	28,512	27,086	195 - 38 - 38
MASON		May 11	Oct. 27	Corn	28,512	23,950	167 - 24 - 24
ALPENA	<b>Zone 4</b>	May 24	Nov. 1	Dry Beans	28,512	27,086	141 - 52 - 52
GRAND TRAVERSE		May 11	Oct. 27	Corn	28,512	27,086	153 - 29 - 149
DELTA		May 10	Oct. 30	Corn	28,512	25,661	174 - 38 - 38

COUNTY		SOIL TYPE	SOIL TEST	FARM COOPERATOR	LOCATION
MONROE	<b>Zone 1</b>	Selfidge Pewamo Complex	pH 6.4 P 53, K320	Gary Kreps	Temperance
BRANCH		Oshtemo Sandy Loam	pH 6.8 P 318, K 510	Remus Riggs	Coldwater
CASS		Kalamazoo Loam	pH 6.7 P 222, K 47	Dave & Mel Cripe	Cassopolis
KENT	<b>Zone 2</b>	Thetford & Spinks Loamy Sand	pH 6.9 P 37, K 240	Pleasant Acres Farm Gerald Kayser	Caledonia
INGHAM		Capac Loam	pH 6.8 P 52, K175	Jorgensen Farms Jerry Jorgesen & Mike Turner	Williamston
SAGINAW		Mistequay Silty Clay	pH 7.9 P 48, K 480	Saginaw Bean & Beet Research Farm, MSU	Saginaw
HURON	<b>Zone 3</b>	Kilmanagh Loam	pH 6.7 P 120, K 460	Wil-Le Farms William, Ron & Ed McCrea	Bad Axe
MONTCALM		McBride Loam	pH 6.3 P 360, K 400	Troy Sackett	Edmore
MASON		Ogemaw Sandy Loam	pH 6.3 P 301, K 455	Robert & August Oshe	Scottville
ALPENA	<b>Zone 4</b>	Selkirk Loam	pH 6.2 P 218, K 420	Allen Schiellard	Hubbard Lake
GRAND TRAVERSE		Karlin Sandy Loam	pH 6.3 P 72, K 110	Richard Dennett	Buckley
DELTA		Onaway Fine Sandy Loam	pH 7.3 P 180, K 600	Benny Herioux	Bark River

**TABLE 1E**                      **AVERAGE OF MONROE, BRANCH & CASS COUNTY GRAIN TRIALS - EARLY (<106 Day)**                      **ZONE 1**

HYBRID		%	2000							2 Year Avg (1999 / 2000)							3 Year Avg (1998 - 2000)						
			TEST	%	%	%	%	%	%	TEST	%	%	%	%	%	TEST	%	%	%	%	%		
BRAND	VARIETY	H2O	BU/A	WT	SL	prot	oil	starch	STD	H2O	BU/A	WT	SL	prot	oil	starch	H2O	BU/A	WT	SL	prot	oil	starch
AGRIPRO	9340	19	155	56	3	9.2	4.4	72.1	85	17	159	57	3	8.6	4.1	66.3	18	169	57	2	8.2	3.8	64.8
AGRIPRO	9466	23	172	53	3	10.3	4.2	69.4	91	20	180	55	2	9.2	4.1	64.8	--	--	--	--	--	--	--
ANDERSON CLASSIC	ELITE 4089	18	152	56	2	9.9	4.5	69.2	93	16	158	57	2	9.3	4.0	64.8	--	--	--	--	--	--	--
ASGROW	RX 508	19	180	57	2	9.4	5.3	69.7	97	--	--	--	--	--	--	--	--	--	--	--	--	--	
BAYSIDE	Super 105	21	187	54	3	9.1	4.7	70.9	93	19	186	55	2	8.4	4.2	65.9	20	189	55	2	7.8	3.9	64.7
BECK'S	5105	21	185	53	3	9.6	4.7	71.1	90	19	185	55	3	8.7	4.3	65.9	20	194	55	2	8.0	3.9	64.7
BECK'S	5166	23	* 208	53	2	9.2	4.4	70.5	94	--	--	--	--	--	--	--	--	--	--	--	--	--	
BROWN	BR 6850	21	185	53	3	9.0	4.7	71.4	89	--	--	--	--	--	--	--	--	--	--	--	--	--	
CARGILL	4521 Bt	18	189	58	2	9.5	4.7	70.4	96	--	--	--	--	--	--	--	--	--	--	--	--	--	
CORN BELT	C 578	22	183	53	4	9.7	4.0	71.1	95	20	182	55	3	9.0	4.0	65.6	--	--	--	--	--	--	--
CORN BELT	C 60F6 ND	21	155	55	23	11.3	5.9	68.2	98	--	--	--	--	--	--	--	--	--	--	--	--	--	
DAIRYLAND	STEALTH-1406	22	185	53	4	9.2	4.8	70.9	89	19	180	55	3	8.4	4.2	66.0	20	192	55	2	7.9	3.9	64.7
DAIRYLAND	STEALTH-1507	23	186	54	2	10.5	4.2	69.5	94	20	183	56	1	9.5	4.1	64.7	--	--	--	--	--	--	--
DAIRYLAND	STEALTH-1606	23	** 209	53	2	9.1	4.3	71.1	96	--	--	--	--	--	--	--	--	--	--	--	--	--	
DEKALB	DK 507	18	164	58	3	9.3	5.0	69.7	97	17	163	59	2	8.4	4.5	65.3	--	--	--	--	--	--	--
DEKALB	DKC53-32	19	165	56	1	9.4	5.0	70.5	77	--	--	--	--	--	--	--	--	--	--	--	--	--	
DEKALB	DK 567	21	189	55	3	9.7	4.5	70.5	97	19	191	57	2	8.8	4.3	65.5	--	--	--	--	--	--	--
DYNA-GRO	DG-5322	21	178	54	3	9.4	4.6	70.4	83	19	180	56	3	8.5	3.9	65.8	--	--	--	--	--	--	--
DYNA-GRO	DG-5324	22	177	55	1	10.5	4.3	69.4	84	--	--	--	--	--	--	--	--	--	--	--	--	--	
DYNA-GRO	DG-X11000	19	168	57	3	10.2	5.3	69.7	89	--	--	--	--	--	--	--	--	--	--	--	--	--	
GARST/AGRIPRO	8590 IT	21	189	55	2	8.9	4.8	71.1	92	20	192	57	2	8.0	4.5	66.0	21	199	57	2	7.6	4.2	64.7
GARST	8640 IT	19	177	55	2	9.5	4.5	70.6	87	18	178	57	2	8.5	4.2	65.7	19	188	57	2	8.1	3.9	64.4
GEERTSON	GS 1067	19	159	55	3	9.1	4.9	70.1	95	18	164	56	3	8.4	4.5	65.3	--	--	--	--	--	--	--
GENESIS	2A06	21	185	53	3	9.2	4.3	71.2	93	--	--	--	--	--	--	--	--	--	--	--	--	--	
GENESIS	2M06	21	176	53	2	9.6	4.9	70.7	88	19	177	55	2	8.9	4.4	65.6	--	--	--	--	--	--	--
GOLDEN HARVEST	H-8290	19	162	54	3	9.2	4.3	70.5	93	--	--	--	--	--	--	--	--	--	--	--	--	--	
GREAT LAKES	5675	21	179	53	3	9.9	4.8	70.1	85	19	183	55	2	8.7	4.3	65.6	--	--	--	--	--	--	--
HIGH CYCLE	HC 350	21	186	53	3	9.1	4.3	72.2	91	--	--	--	--	--	--	--	--	--	--	--	--	--	
HIGH CYCLE	7624 RR	19	176	57	3	8.5	4.5	73.4	90	--	--	--	--	--	--	--	--	--	--	--	--	--	
HIGH CYCLE	7638 Bt	23	184	53	1	10.4	4.1	70.0	85	--	--	--	--	--	--	--	--	--	--	--	--	--	
LG SEEDS	LG 2533	20	162	54	3	9.1	4.9	70.5	87	--	--	--	--	--	--	--	--	--	--	--	--	--	
MYCOGEN	2657	21	178	53	1	9.1	4.5	71.9	88	--	--	--	--	--	--	--	--	--	--	--	--	--	
NOVARTIS	NX 5768	22	169	54	5	9.8	4.6	71.0	93	--	--	--	--	--	--	--	--	--	--	--	--	--	
NOVARTIS	N 57-E3	22	* 201	57	1	9.1	4.2	71.9	94	--	--	--	--	--	--	--	--	--	--	--	--	--	
NOVARTIS	N 58-D1	21	174	54	1	9.4	4.4	70.5	95	20	179	56	1	8.5	3.9	66.0	--	--	--	--	--	--	--
NOVARTIS	N 59-Q9	20	* 198	55	2	9.4	4.0	71.2	96	19	189	57	2	8.3	4.1	66.1	--	--	--	--	--	--	--
PFISTER	2024	20	184	57	6	9.9	4.6	70.7	97	19	181	59	5	8.8	4.4	65.6	--	--	--	--	--	--	--
PFISTER	2025	21	182	53	3	9.4	4.8	71.1	93	19	187	55	3	8.6	4.2	66.0	20	198	55	2	7.9	3.9	64.7
PIONEER	34G82	22	* 194	55	1	8.6	4.5	70.6	95	21	196	56	1	--	--	--	--	--	--	--	--	--	
PIONEER	35P12	20	187	56	2	9.8	4.4	70.4	96	--	--	--	--	--	--	--	--	--	--	--	--	--	
PIONEER	36G12	20	171	57	2	9.1	4.9	70.5	93	19	181	58	2	8.4	4.6	65.5	--	--	--	--	--	--	--
RENK	RK 668	19	177	59	4	9.2	4.3	70.9	87	--	--	--	--	--	--	--	--	--	--	--	--	--	
RENK	RK 685	18	157	55	2	9.4	4.4	70.4	94	--	--	--	--	--	--	--	--	--	--	--	--	--	
RUPP	XR 1682	23	180	53	3	10.0	3.9	70.7	90	21	181	55	3	9.3	4.1	64.9	21	183	56	2	8.8	3.8	63.7
RUPP	8 XP 73 Bt	23	* 197	53	1	10.1	4.2	70.0	96	--	--	--	--	--	--	--	--	--	--	--	--	--	
VIGORO	V 4510	20	180	55	2	8.9	4.3	70.3	96	--	--	--	--	--	--	--	--	--	--	--	--	--	
AVERAGE		21	179	55	3	9.5	4.6	70.6	92	19	180	56	2	8.7	4.2	65.6	20	189	56	2	8.0	3.9	64.6
HIGHEST		23	209	59	23	11.3	5.9	73.4	98	21	196	59	5	9.5	4.6	66.3	21	199	57	2	8.8	4.2	64.8
LOWEST		18	152	53	1	8.5	3.9	68.2	77	16	158	55	1	8.0	3.9	64.9	18	169	55	2	7.6	3.8	63.7
Least Significant Difference (LSD) .05%		1	16	1		0.6	0.6	1.5															
CV		4	6	2		4.6	8.8	1.5															

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID



TABLE 1E

## INDIVIDUAL COUNTY GRAIN TRIALS - MONROE, BRANCH &amp; CASS - EARLY (&lt;106 Day)

ZONE 1

		MONROE								BRANCH								CASS							
HYBRID		%	Bushels/Acre			TEST	%	%	%	Bushels/Acre			TEST	%	%	%	Bushels/Acre			TEST	%	%			
BRAND	VARIETY	H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD			
AGRIPRO	9340	19	183	166	176	54	4	94	19	155	176	184	57	3	80	18	127	134	146	56	1	80			
AGRIPRO	9466	26	179	174	--	51	3	94	22	173	195	--	54	2	91	20	154	166	--	55	2	88			
ANDERSON CLASSIC	ELITE 4089	19	168	158	--	55	2	98	17	147	160	--	57	0	95	17	142	156	--	56	4	86			
ASGROW	RX 508	20	197	--	--	56	4	98	19	181	--	--	58	1	97	18	160	--	--	57	2	96			
BAYSIDE	Super 105	24	198	184	189	51	6	95	20	186	191	194	57	1	91	19	* 178	182	184	53	2	92			
BECK'S	5105	24	210	186	195	52	5	96	21	185	200	210	55	1	95	19	159	168	178	53	2	79			
BECK'S	5166	27	* 222	--	--	51	3	95	23	** 216	--	--	55	2	97	20	* 187	--	--	55	1	89			
BROWN	BR 6850	23	207	--	--	52	4	93	21	179	--	--	54	3	89	20	* 168	--	--	53	2	84			
CARGILL	4521 Bt	20	198	--	--	57	3	97	18	* 199	--	--	59	1	98	17	* 169	--	--	57	1	94			
CORN BELT	C 578	26	198	184	--	51	4	98	22	191	202	--	54	2	92	20	161	162	--	55	4	97			
CORN BELT	C 60F6 ND	24	147	--	--	53	23	98	21	174	--	--	57	11	99	19	143	--	--	57	34	96			
DAIRYLAND	STEALTH-1406	25	197	176	191	52	5	92	21	182	190	202	55	3	89	20	* 176	175	182	53	4	86			
DAIRYLAND	STEALTH-1507	25	200	184	--	53	2	98	22	191	205	--	55	1	95	21	166	159	--	55	2	91			
DAIRYLAND	STEALTH-1606	27	** 231	--	--	51	2	99	22	* 208	--	--	54	1	93	19	** 189	--	--	54	3	97			
DEKALB	DK 507	19	195	169	--	58	2	100	17	141	162	--	59	3	99	17	155	157	--	58	3	91			
DEKALB	DKC53-32	22	182	--	--	55	1	81	18	157	--	--	57	2	76	18	155	--	--	57	1	75			
DEKALB	DK 567	23	205	191	--	53	5	100	20	* 199	212	--	56	3	94	19	164	170	--	56	1	98			
DYNA-GRO	DG-5322	23	* 215	190	--	52	4	89	20	163	186	--	55	3	77	20	154	162	--	55	3	84			
DYNA-GRO	DG-5324	24	186	--	--	52	2	86	21	194	--	--	56	1	85	20	150	--	--	56	2	83			
DYNA-GRO	DG-X11000	19	198	--	--	56	3	94	19	155	--	--	58	2	91	18	152	--	--	56	3	84			
GARST/AGRIPRO	8590 IT	23	198	189	198	53	6	95	20	* 198	208	215	56	1	92	19	* 172	178	184	56	0	89			
GARST	8640 IT	21	194	181	190	53	3	96	18	180	187	195	58	2	86	18	157	167	178	55	2	81			
GEERTSON	GS 1067	21	170	164	--	53	5	98	19	162	176	--	57	2	94	19	145	151	--	54	3	93			
GENESIS	2A06	22	205	--	--	52	3	94	21	189	--	--	54	2	97	19	162	--	--	52	4	87			
GENESIS	2M06	24	195	178	--	52	5	91	21	171	192	--	53	0	89	19	163	162	--	53	3	83			
GOLDEN HARVEST	H-8290	20	178	--	--	53	4	95	18	173	--	--	55	2	92	18	137	--	--	53	3	91			
GREAT LAKES	5675	24	197	183	--	51	7	93	20	178	196	--	54	1	84	20	162	170	--	53	1	79			
HIGH CYCLE	HC 350	22	204	--	--	52	3	93	21	191	--	--	55	3	93	19	164	--	--	53	2	88			
HIGH CYCLE	7624 RR	21	197	--	--	56	5	95	19	171	--	--	57	2	89	18	161	--	--	57	2	85			
HIGH CYCLE	7638 Bt	26	193	--	--	52	0	86	22	* 203	--	--	53	0	88	20	157	--	--	55	1	83			
LG SEEDS	LG 2533	23	203	--	--	52	3	95	19	149	--	--	57	2	89	19	136	--	--	54	3	76			
MYCOGEN	2657	24	196	--	--	52	0	90	20	179	--	--	54	1	88	19	160	--	--	54	1	85			
NOVARTIS	NX 5768	24	178	--	--	51	7	96	21	165	--	--	55	4	92	20	163	--	--	55	3	92			
NOVARTIS	N 57-E3	23	* 215	--	--	56	0	99	21	* 214	--	--	58	2	97	22	* 173	--	--	56	1	86			
NOVARTIS	N 58-D1	23	187	182	--	52	0	95	21	178	190	--	54	1	94	19	157	166	--	55	1	95			
NOVARTIS	N 59-Q9	22	212	193	--	53	2	99	20	* 201	196	--	57	1	97	19	* 179	178	--	56	3	92			
PFISTER	2024	22	192	174	--	56	5	98	19	184	191	--	58	1	95	19	* 176	178	--	58	13	97			
PFISTER	2025	23	208	189	199	52	5	97	20	177	197	208	53	2	89	19	161	176	187	53	2	93			
PIONEER	34G82	25	* 216	197	--	54	2	99	22	* 209	223	--	56	0	99	20	159	167	--	55	2	86			
PIONEER	35P12	22	204	--	--	55	4	97	19	174	--	--	56	0	95	19	* 184	--	--	56	3	97			
PIONEER	36G12	21	197	185	--	56	3	94	19	164	186	--	58	2	93	19	154	171	--	58	2	93			
RENK	RK 668	20	208	--	--	58	4	92	19	181	--	--	60	3	90	18	142	--	--	59	4	80			
RENK	RK 685	19	187	--	--	55	3	97	17	147	--	--	55	1	97	17	138	--	--	55	2	90			
RUPP	XR 1682	25	202	189	188	51	5	94	21	184	200	200	54	1	84	21	155	155	162	55	2	92			
RUPP	8 XP 73 Bt	26	212	--	--	51	1	98	23	* 200	--	--	53	0	94	21	* 179	--	--	54	2	96			
VIGORO	V 4510	23	197	--	--	52	4	99	20	186	--	--	58	0	98	18	159	--	--	54	2	92			
AVERAGE		23	197	181	191	53	4	95	20	180	192	201	56	2	92	19	160	166	175	55	3	88			
HIGHEST		27	231	197	199	58	23	100	23	216	223	215	60	11	99	22	189	182	187	59	34	98			
LOWEST		19	147	158	176	51	0	81	17	141	160	184	53	0	76	17	127	134	146	52	0	75			
Least Significant Difference (LSD) .05%		1	16			2			1	18			3			1	21			2					
CV		4	6			2			4	7			4			5	10			3					

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID



BRAND	HYBRID VARIETY	%	2000							2 Year Avg (1999 / 2000)							3 Year Avg (1998 - 2000)						
			TEST	%	%	%	%	%	%	TEST	%	%	%	%	%	%	TEST	%	%	%	%	%	%
		H2O	BU/A	WT	SL	prot	oil	starch	STD	H2O	BU/A	WT	SL	prot	oil	starch	H2O	BU/A	WT	SL	prot	oil	starch
ANDERSON CLASSIC	ELITE 5507	22	192	53	2	10.2	4.0	70.8	95	20	187	55	2	9.3	4.0	65.4	--	--	--	--	--	--	--
ASGROW	RX 637	19	181	55	5	8.9	4.7	72.1	95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ASGROW	RX 708	22	195	55	2	9.8	4.5	70.5	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ASGROW	RX 730 YG	24	194	53	1	9.2	4.1	72.2	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BAYSIDE	Super 109	23	175	53	2	9.6	4.9	69.9	93	21	181	55	2	8.6	4.5	65.2	--	--	--	--	--	--	--
BECK'S	5283 Bt 1	22	** 211	54	1	9.5	4.8	70.6	92	20	201	56	1	8.7	4.4	65.5	--	--	--	--	--	--	--
BECK'S	5305	22	183	53	1	9.3	4.7	70.3	94	21	184	55	1	7.5	3.8	65.3	21	190	55	1	7.9	4.0	64.3
BECK'S	5322	24	* 205	52	2	9.0	4.6	71.3	94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BIO GENE	BG 307	22	186	53	2	9.1	4.2	71.8	97	21	183	55	1	8.5	4.2	66.0	22	194	55	1	8.1	4.0	64.8
BIO GENE	BG 309	23	170	53	2	9.3	4.7	70.2	86	21	180	55	2	8.1	4.4	65.7	22	190	55	1	7.7	4.1	64.5
BIO GENE	BT 311	23	189	53	1	9.3	4.8	70.3	95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BIO GENE	BG 1070	21	183	58	3	10.0	5.0	69.2	98	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BIO GENE	BG 1080	23	192	53	4	9.8	4.0	71.1	97	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BIO GENE	BG 1091	24	171	53	3	9.9	4.7	70.3	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BIO GENE	BG 1100	23	179	52	2	8.9	4.5	71.8	92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROWN	BR 7041	23	184	54	2	9.1	4.4	71.1	94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROWN	BR 7044	23	* 205	52	2	9.4	5.0	70.1	95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CARGILL	6888	22	193	53	1	8.7	4.2	72.2	96	21	194	55	1	8.1	4.2	66.5	22	199	55	1	7.5	4.0	65.1
CORN BELT	C 609	23	187	53	3	8.7	4.6	71.6	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CORN BELT	C 611	22	187	53	2	9.1	4.8	70.8	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CROW'S	C 363	21	174	53	2	9.0	4.7	71.6	93	19	177	55	2	8.4	4.2	66.2	--	--	--	--	--	--	--
DAIRYLAND	STEALTH-1412	22	193	54	1	9.1	4.2	72.3	97	21	190	56	1	8.1	4.1	66.7	22	198	56	1	7.5	3.9	65.3
DAIRYLAND	STEALTH-1609	23	188	53	3	9.9	4.7	70.6	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DKC58-52	22	193	55	0	9.0	5.0	70.7	94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DK 595 BtY	22	181	55	1	9.9	4.2	71.3	97	19	178	57	1	9.3	4.1	65.6	21	185	56	1	8.5	3.7	64.7
DEKALB	DKC61-24	24	178	53	1	10.0	4.4	70.8	94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DYNA-GRO	DG-5352	22	182	54	1	10.0	5.3	69.4	91	21	183	55	1	8.8	4.7	65.0	--	--	--	--	--	--	--
GARST/AGRI PRO	8464 IT	24	194	52	1	9.3	5.8	69.5	94	22	191	55	1	8.2	4.9	65.3	--	--	--	--	--	--	--
GARST	8541 IT	21	180	54	3	8.8	5.1	71.2	94	20	181	56	2	8.1	4.7	65.8	--	--	--	--	--	--	--
GEERTSON	GS 1117	22	191	53	1	8.9	4.3	72.0	97	21	191	55	1	8.0	4.2	66.5	22	197	55	1	7.5	4.0	65.1
GOLDEN HARVEST	Ex 08799	23	* 207	53	2	8.8	4.1	71.5	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GREAT LAKES	5758	22	192	54	2	9.8	4.0	71.1	97	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GREAT LAKES	5816	22	176	54	2	9.1	4.7	71.1	93	21	180	55	1	8.2	4.2	66.1	22	186	55	1	7.8	3.9	64.8
GRIES	GSF X700	23	192	54	2	10.1	4.1	70.3	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GUTWEIN	2515	24	189	52	1	10.2	5.0	70.1	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GUTWEIN	2520CL	22	176	53	3	9.5	5.0	69.9	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HIGH CYCLE	7747 Bt	24	187	52	1	8.6	3.8	73.0	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LG SEEDS	LG 2583	23	179	53	2	8.6	4.6	71.2	93	21	186	55	2	8.1	4.3	65.9	22	195	55	2	7.7	4.0	64.6
LG SEEDS	LG 2585	23	* 207	53	3	9.1	5.0	70.7	97	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MIDWEST GENETIC	G 7711	24	188	53	1	9.3	4.3	71.6	93	22	189	55	1	8.2	4.2	66.4	--	--	--	--	--	--	--
MYCOGEN	X29806	23	192	51	1	9.3	4.2	71.9	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVARTIS	N 65-A1	22	181	54	1	9.7	5.1	69.3	95	20	183	56	1	8.6	4.5	65.1	--	--	--	--	--	--	--
NOVARTIS	N 70-D5	27	191	54	1	10.5	4.0	70.0	94	24	192	56	1	9.0	4.0	65.5	--	--	--	--	--	--	--
PIONEER	33T90	25	189	54	3	7.5	3.8	73.9	96	22	187	56	3	7.6	3.8	67.4	--	--	--	--	--	--	--
PIONEER	34B24	25	* 197	56	0	9.4	3.3	72.2	95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PIONEER	34K77	21	191	56	1	9.5	4.8	71.0	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PIONEER	34E79	23	181	55	1	10.3	5.2	69.4	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RENK	RK 768	19	171	57	2	9.3	4.5	71.9	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RENK	RK 806	23	* 207	52	3	9.1	4.3	70.9	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RENK	RK 837	22	179	53	3	9.2	4.8	70.9	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RENK	RK 864	22	179	53	2	8.9	4.2	72.1	91	21	188	55	1	8.0	4.2	66.6	22	197	55	1	7.6	3.9	65.1
RUPP	XR 1733	22	177	53	2	9.5	4.9	70.0	95	20	181	55	1	8.6	4.5	65.3	22	188	55	1	8.0	4.2	64.2
RUPP	XR 8108 Bt	23	181	52	1	9.4	4.7	70.5	93	21	180	54	1	8.6	4.4	65.5	--	--	--	--	--	--	--
RUPP	1 XP 87	23	174	52	2	9.1	4.6	71.4	85	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STEYER	NC 108	23	159	53	3	9.5	4.9	70.1	84	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STEYER	St 2380	22	172	54	2	10.5	4.3	69.6	84	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRELAY	9095	22	179	54	3	8.8	4.3	72.3	91	21	185	55	2	8.0	4.1	66.7	22	193	55	2	7.5	3.9	65.3
VIGORO	V 4910	23	* 200	53	2	9.2	4.3	70.8	94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AVERAGE		23	186	53	2	9.4	4.5	71.0	94	21	185	55	1	8.4	4.3	65.9	22	193	55	1	7.8	4.0	64.8
HIGHEST		27	211	58	5	10.5	5.8	73.9	99	24	201	57	3	9.3	4.9	67.4	22	199	56	2	8.5	4.2	65.3
LOWEST		19	159	51	0	7.5	3.3	69.2	84	19	177	54	1	7.5	3.8	65.0	21	185	55	1	7.5	3.7	64.2

Least Significant Difference (LSD) .05%

CV

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID

TABLE 1L

INDIVIDUAL COUNTY GRAIN TRIALS - MONROE, BRANCH &amp; CASS - LATE (&gt;107 Day)

ZONE 1

BRAND	HYBRID VARIETY	%	MONROE						BRANCH						CASS							
			%	Bushels/Acre	TEST	%	%	%	Bushels/Acre	TEST	%	%	%	Bushels/Acre	TEST	%	%					
		H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD
ANDERSON CLASSIC	ELITE 5507	25	197	184	--	51	2	95	21	* 207	210	--	54	2	93	21	172	167	--	55	2	98
ASGROW	RX 637	21	184	--	--	53	8	98	18	195	--	--	56	4	95	18	164	--	--	56	3	93
ASGROW	RX 708	26	213	--	--	53	1	100	21	200	--	--	54	2	99	19	170	--	--	57	2	99
ASGROW	RX 730 YG	27	208	--	--	52	1	95	23	187	--	--	52	0	99	22	* 186	--	--	56	1	94
BAYSIDE	Super 109	26	181	174	--	50	1	92	21	178	200	--	53	2	97	20	166	171	--	54	1	89
BECK'S	5283 Bt 1	26	* 229	207	--	52	1	89	21	* 210	207	--	54	0	97	20	** 195	188	--	55	0	90
BECK'S	5305	25	198	186	189	52	2	96	21	186	197	201	54	1	96	21	165	169	178	55	2	90
BECK'S	5322	28	* 222	--	--	50	2	93	24	201	--	--	51	1	96	21	* 191	--	--	55	2	91
BIO GENE	BG 307	25	201	185	195	51	2	100	21	184	190	201	53	2	95	21	172	174	186	55	1	96
BIO GENE	BG 309	26	190	181	186	52	4	96	21	179	196	208	54	0	95	22	142	162	174	54	1	66
BIO GENE	BT 311	27	202	--	--	51	1	92	21	199	--	--	53	0	97	21	165	--	--	54	1	96
BIO GENE	BG 1070	25	204	--	--	56	5	100	20	191	--	--	59	2	97	18	155	--	--	60	3	98
BIO GENE	BG 1080	26	214	--	--	52	5	99	22	200	--	--	52	4	98	21	162	--	--	54	4	94
BIO GENE	BG 1091	27	183	--	--	51	4	97	24	181	--	--	52	3	95	22	151	--	--	55	2	97
BIO GENE	BG 1100	26	194	--	--	49	4	91	21	182	--	--	52	1	94	22	160	--	--	53	2	92
BROWN	BR 7041	25	204	--	--	53	1	93	22	188	--	--	54	1	98	20	159	--	--	55	2	90
BROWN	BR 7044	27	* 223	--	--	51	2	96	23	* 210	--	--	51	1	94	20	* 182	--	--	54	2	94
CARGILL	6888	25	200	193	201	51	2	98	20	196	208	209	54	1	95	21	* 182	182	186	55	1	96
CORN BELT	C 609	27	206	--	--	51	2	98	21	191	--	--	52	3	94	21	165	--	--	56	4	94
CORN BELT	C 611	26	190	--	--	50	3	91	21	191	--	--	54	0	93	20	* 180	--	--	56	1	96
CROW'S	C 363	25	200	182	--	51	4	91	20	172	188	--	53	0	95	19	151	161	--	54	1	93
DAIRYLAND	STEALTH-1412	25	203	190	198	52	3	99	21	182	197	206	53	0	97	21	** 195	185	190	56	1	95
DAIRYLAND	STEALTH-1609	28	212	--	--	50	2	94	23	183	--	--	53	2	94	18	167	--	--	56	5	91
DEKALB	DKC58-52	25	* 217	--	--	54	1	96	21	185	--	--	55	0	93	18	* 178	--	--	57	0	93
DEKALB	DK 595 BtY	25	203	179	187	52	1	98	21	189	191	196	56	1	94	18	150	165	171	56	1	98
DEKALB	DKC61-24	27	191	--	--	52	2	96	24	186	--	--	53	0	92	21	156	--	--	56	2	93
DYNA-GRO	DG-5352	26	198	182	--	52	0	92	20	187	203	--	54	2	90	21	160	164	--	55	2	90
GARST/AGRIPRO	8464 IT	28	* 217	196	--	51	1	93	22	193	202	--	53	0	97	23	174	176	--	53	0	91
GARST	8541 IT	24	183	179	--	52	5	96	20	186	193	--	56	2	94	21	172	172	--	55	2	93
GEERTSON	GS 1117	25	203	190	196	51	2	95	21	185	199	207	53	0	99	20	* 185	185	189	56	1	96
GOLDEN HARVEST	Ex 08799	27	211	--	--	51	3	96	22	** 217	--	--	53	1	94	19	* 193	--	--	55	1	97
GREAT LAKES	5758	25	211	--	--	52	3	99	21	199	--	--	54	1	96	20	164	--	--	55	2	95
GREAT LAKES	5816	26	191	181	180	53	3	94	20	183	195	200	54	1	95	20	153	163	178	54	3	91
GRIES	GSF X700	25	205	--	--	53	4	96	21	* 207	--	--	54	1	99	21	162	--	--	56	2	93
GUTWEIN	2515	27	205	--	--	51	2	94	24	187	--	--	52	1	89	21	* 176	--	--	55	0	95
GUTWEIN	2520CL	26	192	--	--	50	7	92	20	180	--	--	55	1	89	20	156	--	--	55	1	91
HIGH CYCLE	7747 Bt	27	202	--	--	50	0	97	23	181	--	--	52	1	95	23	* 177	--	--	54	1	95
LG SEEDS	LG 2583	26	179	180	185	50	5	97	21	188	203	213	54	0	92	21	169	174	187	55	2	92
LG SEEDS	LG 2585	29	** 234	--	--	50	2	100	22	* 215	--	--	53	1	96	20	172	--	--	55	5	96
MIDWEST GENETIC	G 7711	27	207	195	--	52	0	92	23	179	196	--	53	1	91	23	* 177	175	--	53	1	95
MYCOGEN	X29806	27	208	--	--	50	2	89	22	195	--	--	51	0	90	21	173	--	--	52	1	91
NOVARTIS	N 65-A1	25	198	186	--	51	0	95	21	185	200	--	54	1	96	20	159	164	--	56	0	93
NOVARTIS	N 70-D5	30	203	192	--	51	1	94	26	* 205	213	--	54	0	95	24	165	170	--	56	2	92
PIONEER	33T90	27	194	182	--	52	6	98	25	194	201	--	54	1	97	22	* 177	177	--	56	3	95
PIONEER	34B24	27	* 220	--	--	54	1	97	25	* 204	--	--	55	0	96	22	167	--	--	57	0	94
PIONEER	34K77	23	213	--	--	55	2	98	20	196	--	--	57	0	96	20	164	--	--	57	1	94
PIONEER	34E79	27	193	--	--	52	2	99	23	198	--	--	55	1	96	21	152	--	--	57	1	94
RENK	RK 768	21	180	--	--	55	1	92	19	183	--	--	58	2	89	18	151	--	--	59	2	89
RENK	RK 806	28	* 225	--	--	50	5	98	22	* 207	--	--	52	1	95	20	* 188	--	--	55	2	94
RENK	RK 837	26	188	--	--	50	4	89	20	182	--	--	54	2	90	20	168	--	--	54	2	92
RENK	RK 864	25	189	180	189	51	3	91	21	172	197	205	54	1	90	20	* 177	188	196	55	2	91
RUPP	XR 1733	25	195	180	188	52	2	96	20	179	197	201	54	2	95	21	157	166	177	54	2	93
RUPP	XR 8108 Bt	26	204	187	--	50	2	96	21	184	195	--	53	0	91	21	155	159	--	54	2	93
RUPP	1 XP 87	27	187	--	--	50	1	77	22	169	--	--	52	1	87	20	167	--	--	54	2	90
STEYER	NC 108	26	174	--	--	51	4	87	20	162	--	--	54	1	86	22	142	--	--	54	3	80
STEYER	St 2380	26	180	--	--	52	2	84	21	182	--	--	53	3	88	20	154	--	--	56	3	79
TRELAY	9095	25	198	186	194	53	4	96	21	171	188	197	54	2	90	20	169	181	187	54	2	88
VIGORO	V 4910	28	213	--	--	51	2	96	22	* 208	--	--	53	2	96	19	* 179	--	--	55	2	91
AVERAGE		26	201	186	191	51	2	95	21	190	199	204	54	1	94	20	168	172	183	55	2	92
HIGHEST		30	234	207	201	56	8	100	26	217	213	213	59	4	99	24	195	188	196	60	5	99
LOWEST		20	174	174	180	49	0	77	18	162	188	196	51	0	86	18	142	159	171	52	0	66
Least Significant Difference (LSD) .05%		1	19			2			1	13			1			1	20			2		
CV		3	7			3			4	5			2			5	9			2		

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID

TABLE 2E

AVERAGE OF KENT, INGHAM &amp; SAGINAW COUNTY GRAIN TRIALS - EARLY (&lt;101 Day)

ZONE 2

BRAND	HYBRID VARIETY	2000								2 Year Avg (1999 / 2000)							3 Year Avg (1998 - 2000)						
		% H2O	TEST BU/A	% WT	% SL	% prot	% oil	% starch	% STD	% H2O	TEST BU/A	% WT	% SL	% prot	% oil	% starch	% H2O	TEST BU/A	% WT	% SL	% prot	% oil	% starch
ANDERSON CLASSIC	ELITE 4089	18	173	54	2	9.8	4.3	69.1	96	19	185	55	1	9.0	4.0	64.8	--	--	--	--	--	--	--
ASGROW	RX 393 YG	17	175	56	1	8.9	4.9	70.1	95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ASGROW	RX 452 YG	20	164	56	0	9.4	5.1	70.8	88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BAYSIDE	1792	18	182	56	3	8.2	4.1	73.8	94	18	185	57	2	7.7	4.1	67.3	18	170	57	2	7.8	4.0	65.2
BAYSIDE	Super 93	18	182	56	3	8.8	4.5	72.2	96	18	188	57	2	8.3	4.3	66.4	18	169	57	2	8.4	4.0	64.4
BAYSIDE	Super 96	19	165	55	1	8.9	5.6	70.0	92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BAYSIDE	Super 100	19	176	55	1	9.1	4.0	71.5	97	19	182	56	1	8.5	4.0	66.0	20	170	56	1	8.7	3.8	64.0
BAYSIDE	Super 101	20	178	55	1	10.0	5.7	68.2	95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BIO GENE	BG 095 A	20	183	58	1	9.0	4.4	71.0	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BIO GENE	BG 098	18	179	55	1	9.0	4.7	72.4	95	18	185	57	1	8.4	4.4	66.4	--	--	--	--	--	--	--
BIO GENE	BT 098	19	* 190	54	1	9.3	4.8	72.1	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BROWN	BR 5341	22	* 191	53	1	10.5	4.1	69.9	96	21	192	54	1	9.5	3.9	65.1	--	--	--	--	--	--	--
CORN BELT	C 528	18	175	54	1	10.0	4.5	69.4	98	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CROW'S	C 217 Bt	19	* 194	56	0	8.7	4.6	71.6	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DAIRYLAND	STEALTH-1496	18	* 186	56	3	9.0	4.7	71.9	98	18	186	57	2	8.3	4.4	66.3	18	171	57	2	8.4	4.1	64.3
DAIRYLAND	STEALTH-1502	20	176	53	4	8.8	4.1	72.8	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DKC42-22	17	184	57	1	8.3	4.9	70.7	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DKC44-42	17	183	55	1	8.7	5.4	69.9	97	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DKC46-26	17	169	57	1	8.4	4.7	71.1	91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DKC47-72	18	168	57	2	9.2	4.9	70.9	97	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DKC48-83	18	182	57	2	8.9	5.0	71.2	98	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DKC49-92	18	180	56	1	9.1	5.4	68.9	95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DK 507	18	178	56	3	9.4	5.2	69.6	98	18	187	57	2	8.6	4.5	65.2	--	--	--	--	--	--	--
DYNA-GRO	DG-5222	19	181	56	3	9.1	4.6	72.2	92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DYNA-GRO	DG-5308	19	164	53	1	10.3	4.2	69.5	94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DYNA-GRO	DG-5345	20	173	54	1	9.4	4.0	72.0	96	19	179	56	1	8.5	3.9	66.5	--	--	--	--	--	--	--
DYNA-GRO	DG-X11000	19	183	55	1	10.5	5.0	69.5	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GARST	8766 IT	20	175	57	0	8.8	4.4	71.4	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GARST	8780 HpH	20	182	55	1	10.1	5.5	69.1	97	20	186	56	1	9.3	4.8	64.4	20	172	56	1	9.2	4.4	62.9
GENESIS	1996	18	180	56	3	9.3	4.8	70.8	96	18	185	57	2	8.8	4.5	65.4	18	172	57	2	8.7	4.2	63.7
GENESIS	2M100	18	161	54	1	10.3	4.5	68.9	89	19	183	55	1	9.1	4.1	64.9	--	--	--	--	--	--	--
GOLDEN HARVEST	Ex 97153	19	173	55	1	10.1	5.3	69.4	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GOLDEN HARVEST	Ex 07807	18	165	54	1	10.2	4.5	69.3	90	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GOLDEN HARVEST	H-7669	22	184	53	1	10.8	4.3	69.6	97	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GREAT LAKES	4526	18	* 186	56	2	9.1	4.6	72.2	95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GREAT LAKES	4648	18	173	57	3	8.8	5.1	71.3	97	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GREAT LAKES	4964	21	* 189	53	3	10.4	4.9	68.7	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GREAT LAKES	5162	23	176	50	2	10.5	4.5	69.2	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LG SEEDS	LG 2473	19	180	56	3	9.1	5.4	69.3	97	18	184	57	2	8.5	4.6	65.0	18	165	57	2	8.6	4.3	63.6
LG SEEDS	LG 2484	20	176	55	3	9.5	5.7	68.7	99	20	189	56	2	8.6	4.7	64.9	--	--	--	--	--	--	--
LG SEEDS	LG 2488	25	180	54	2	10.4	4.8	68.9	92	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LG SEEDS	LG 2499	25	* 192	51	1	11.2	4.3	68.6	98	23	190	53	1	10.1	4.1	64.1	23	174	54	1	10.2	3.9	62.5
MYCOGEN	2544 IMI	20	183	55	1	9.6	4.2	71.3	98	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVARTIS	N 3030 Bt	18	175	57	3	9.6	4.9	70.7	99	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVARTIS	N 43-C4	18	* 186	55	0	10.0	4.6	68.8	91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOVARTIS	N 45-T5	18	181	55	1	9.0	5.5	69.0	91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PIONEER	37M34	20	* 186	57	3	9.8	3.8	70.3	96	19	192	59	2	9.2	3.7	65.3	--	--	--	--	--	--	--
PIONEER	37R71	20	** 199	55	1	9.2	5.3	69.5	98	19	193	56	2	8.5	4.7	65.0	19	177	56	2	8.4	4.3	63.7
PIONEER	38P06	19	175	57	2	10.4	4.5	69.8	90	19	184	58	1	9.4	4.2	65.1	--	--	--	--	--	--	--
PIONEER	38T27	19	* 188	58	2	10.0	4.8	69.8	96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RENK	RK 569	19	178	55	1	9.5	5.7	68.9	98	18	185	57	1	8.8	4.8	64.7	--	--	--	--	--	--	--
RENK	RK 606	20	172	58	2	9.1	4.1	72.1	95	20	178	59	1	8.4	4.0	66.5	--	--	--	--	--	--	--
RENK	RK 685	17	180	54	1	9.6	4.6	69.5	98	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RENK	RK 695	18	169	53	1	9.6	4.3	69.6	98	--	--	--	--	--	--	--	--	--	--	--	--	--	--
RUPP	XR 1583	18	160	54	3	10.2	4.3	69.5	95	18	177	55	2	9.1	4.0	65.1	--	--	--	--	--	--	--
STEYER	ST 2180	21	161	55	1	9.4	3.9	71.2	87	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRELAY	4001	18	173	56	3	9.2	4.9	71.0	94	18	183	57	2	8.6	4.5	65.6	--	--	--	--	--	--	--
TRELAY	4002	18	180	55	1	9.2	4.4	72.1	90	18	185	57	1	8.4	4.2	66.4	18	171	57	1	8.4	4.0	64.5
TRELAY	5100	21	171	54	2	9.1	4.5	72.2	91	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRELAY	5600	20	183	58	1	9.0	4.0	71.6	96	19	185	59	1	8.2	3.9	66.3	--	--	--	--	--	--	--
AVERAGE		19	178	55	2	9.5	4.7	70.4	95	19	185	56	1	8.7	4.3	65.5	19	171	56	1	8.7	4.1	63.9
HIGHEST		25	199	58	4	11.2	5.7	73.8	99	23	193	59	2	10.1	4.8	67.3	23	177	57	2	10.2	4.4	65.2
LOWEST		17	160	50	0	8.2	3.8	68.2	87	18	177	53	1	7.7	3.7	64.1	18	165	54	1	7.8	3.8	62.5
Least Significant Difference (LSD) .05%		1	14	1		0.6	0.4	1.3															
CV		4	5	1		4.4	6.6	1.2															

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID



TABLE 2E

## INDIVIDUAL COUNTY GRAIN TRIALS - KENT, INGHAM &amp; SAGINAW - EARLY (&lt;101 Day)

ZONE 2

BRAND	HYBRID VARIETY	KENT							INGHAM							SAGINAW						
		% H2O	Bushels/Acre			TEST WT	% SL	% STD	% H2O	Bushels/Acre			TEST WT	% SL	% STD	% H2O	Bushels/Acre			TEST WT	% SL	% STD
ANDERSON CLASSIC	ELITE 4089	19	168	185	--	52	1	92	18	174	178	--	56	2	97	17	178	191	--	56	1	99
ASGROW	RX 393 YG	18	176	--	--	54	3	92	18	193	--	--	58	0	96	16	156	--	--	57	0	96
ASGROW	RX 452 YG	22	170	--	--	52	1	93	19	165	--	--	59	0	83	18	156	--	--	58	0	89
BAYSIDE	1792	19	173	181	164	52	7	92	18	191	185	179	58	1	93	17	* 183	188	166	57	1	99
BAYSIDE	Super 93	18	176	181	162	54	4	93	18	187	192	178	57	3	98	18	* 183	191	166	56	1	97
BAYSIDE	Super 96	20	158	--	--	53	2	88	19	185	--	--	57	2	94	17	153	--	--	57	1	95
BAYSIDE	Super 100	20	165	180	167	53	1	92	19	190	189	183	57	1	99	19	174	176	159	55	0	99
BAYSIDE	Super 101	20	179	--	--	52	2	93	19	180	--	--	57	1	96	19	176	--	--	57	1	97
BIO GENE	BG 095 A	21	170	--	--	54	1	95	20	192	--	--	59	2	96	18	* 185	--	--	60	1	97
BIO GENE	BG 098	18	170	179	--	53	2	92	18	189	187	--	57	2	95	18	177	188	--	57	0	98
BIO GENE	BT 098	19	180	--	--	51	2	97	18	* 205	--	--	57	0	96	18	* 185	--	--	55	0	94
BROWN	BR 5341	24	* 186	195	--	49	3	97	21	* 199	191	--	55	1	98	21	* 187	189	--	54	0	95
CORN BELT	C 528	19	174	--	--	51	0	97	18	171	--	--	55	0	99	17	* 181	--	--	55	1	98
CROW'S	C 217 Bt	21	** 198	--	--	52	0	98	19	* 199	--	--	57	1	100	18	* 185	--	--	57	0	98
DAIRYLAND	STEALTH-1496	19	174	179	164	52	3	95	18	* 199	191	183	57	3	100	18	* 184	187	167	57	2	100
DAIRYLAND	STEALTH-1502	23	172	--	--	50	8	93	20	194	--	--	56	3	98	17	162	--	--	54	2	96
DEKALB	DKC42-22	18	* 188	--	--	55	1	95	17	188	--	--	58	0	98	16	175	--	--	58	1	94
DEKALB	DKC44-42	19	176	--	--	52	3	92	17	* 201	--	--	56	0	100	16	172	--	--	56	1	99
DEKALB	DKC46-26	18	172	--	--	55	4	88	17	175	--	--	58	1	91	16	160	--	--	58	0	94
DEKALB	DKC47-72	19	156	--	--	53	4	96	18	172	--	--	59	1	97	17	177	--	--	58	0	99
DEKALB	DKC48-83	18	165	--	--	54	3	96	18	190	--	--	59	0	98	18	* 190	--	--	59	1	99
DEKALB	DKC49-92	19	173	--	--	53	0	91	18	191	--	--	58	1	97	17	176	--	--	58	0	96
DEKALB	DK 507	19	* 182	193	--	54	3	96	19	177	188	--	57	3	98	17	174	181	--	57	2	100
DYNA-GRO	DG-5222	19	161	--	--	52	6	91	18	196	--	--	58	2	95	19	* 186	--	--	57	2	89
DYNA-GRO	DG-5308	21	158	--	--	50	2	98	18	159	--	--	55	1	90	18	175	--	--	55	0	95
DYNA-GRO	DG-5345	21	175	176	--	52	1	96	19	176	176	--	56	0	97	19	169	185	--	55	1	96
DYNA-GRO	DG-X11000	20	176	--	--	52	3	92	18	192	--	--	57	1	93	18	* 181	--	--	56	0	95
GARST	8766 IT	21	167	--	--	54	0	89	21	182	--	--	57	0	95	20	175	--	--	59	0	96
GARST	8780 HpH	21	171	185	167	52	2	94	19	192	194	189	56	1	99	19	* 183	180	158	57	1	100
GENESIS	1996	18	* 188	196	179	54	5	99	18	170	173	171	58	3	93	18	* 184	186	165	58	1	97
GENESIS	2M100	19	153	178	--	51	2	89	17	160	179	--	56	1	89	17	169	191	--	56	1	90
GOLDEN HARVEST	Ex 97153	19	167	--	--	51	1	90	19	188	--	--	57	1	99	18	165	--	--	56	1	99
GOLDEN HARVEST	Ex 07807	19	157	--	--	52	1	88	18	170	--	--	57	1	91	17	166	--	--	54	0	92
GOLDEN HARVEST	H-7669	23	* 182	--	--	50	1	98	21	183	--	--	54	2	97	21	* 186	--	--	54	0	95
GREAT LAKES	4526	19	173	--	--	54	3	91	18	* 201	--	--	58	3	97	18	* 183	--	--	56	1	98
GREAT LAKES	4648	18	174	--	--	55	5	97	17	174	--	--	57	3	98	17	172	--	--	59	1	97
GREAT LAKES	4964	23	* 190	--	--	49	4	99	20	198	--	--	55	3	98	19	180	--	--	54	1	99
GREAT LAKES	5162	25	180	--	--	48	4	97	23	180	--	--	52	1	91	21	169	--	--	51	0	92
LG SEEDS	LG 2473	19	181	184	166	52	6	98	19	182	183	172	57	1	96	17	176	185	158	58	2	97
LG SEEDS	LG2484	22	173	192	--	52	6	98	19	180	189	--	57	1	99	19	175	187	--	57	1	100
LG SEEDS	LG 2488	26	169	--	--	51	2	94	23	190	--	--	55	2	87	24	* 181	--	--	56	2	95
LG SEEDS	LG 2499	27	* 186	192	174	48	3	94	23	* 202	197	187	53	1	99	24	* 187	181	162	52	0	100
MYCOGEN	2544 IMI	20	181	--	--	53	2	98	20	191	--	--	58	2	99	20	178	--	--	56	0	96
NOVARTIS	N 3030 Bt	19	168	--	--	53	8	98	18	171	--	--	58	1	98	17	* 187	--	--	58	0	100
NOVARTIS	N 43-C4	19	* 182	--	--	52	1	90	18	197	--	--	56	0	91	18	180	--	--	55	0	92
NOVARTIS	N 45-T5	19	174	--	--	53	2	91	19	191	--	--	56	2	92	17	178	--	--	56	0	91
PIONEER	37M34	20	* 183	193	--	54	2	94	20	181	187	--	59	6	97	20	** 193	195	--	58	2	96
PIONEER	37R71	21	* 195	190	172	51	1	98	20	** 211	197	190	56	0	98	18	* 192	193	170	57	0	97
PIONEER	38P06	18	* 182	192	--	55	4	94	19	171	183	--	59	1	86	18	173	177	--	58	1	91
PIONEER	38T27	19	* 195	--	--	56	3	99	19	192	--	--	60	1	95	19	177	--	--	59	1	95
RENK	RK 569	21	181	190	--	52	1	99	19	189	188	--	57	1	97	17	162	178	--	57	1	99
RENK	RK 606	22	160	179	--	54	1	93	20	180	178	--	60	2	94	18	176	178	--	60	1	97
RENK	RK 685	18	* 186	--	--	52	1	99	17	179	--	--	56	0	99	17	173	--	--	55	0	95
RENK	RK 695	19	169	--	--	50	1	97	17	161	--	--	55	3	98	17	177	--	--	54	0	99
RUPP	XR 1583	19	156	180	--	52	8	94	17	160	167	--	55	1	94	17	165	185	--	55	1	97
STEYER	St 2180	23	139	--	--	52	0	83	19	174	--	--	57	2	90	20	168	--	--	57	0	89
TRELAY	4001	18	169	184	--	53	2	90	17	170	182	--	57	3	94	18	* 181	184	--	57	3	97
TRELAY	4002	18	166	182	164	53	1	90	18	191	186	182	57	3	90	18	* 183	187	165	57	0	91
TRELAY	5100	25	154	--	--	49	2	85	20	190	--	--	56	1	93	17	169	--	--	55	2	94
TRELAY	5600	21	178	185	--	54	2	93	20	196	184	--	60	1	97	18	175	185	--	59	1	98
AVERAGE		20	173	185	168	52	3	94	19	184	185	181	57	1	95	18	176	185	163	56	1	96
HIGHEST		27	198	196	179	56	8	99	23	211	197	190	60	6	100	24	193	195	170	60	3	100
LOWEST		18	139	176	162	48	0	83	17	159	167	171	53	0	83	16	153	176	158	51	0	89
Least Significant Difference (LSD) .05%		2	16			2			1	12			2			1	12			2		
CV		6	7			3			3	5			2			3	5			2		

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID

HYBRID		2000									2 Year Avg (1999 / 2000)							3 Year Avg (1998 - 2000)						
		%	TEST	%	%	%	%	%	%	%	%	TEST	%	%	%	%	%	TEST	%	%	%	%	%	
BRAND	VARIETY	H2O	BU/A	WT	SL	prot	oil	starch	STD	H2O	BU/A	WT	SL	prot	oil	starch	H2O	BU/A	WT	SL	prot	oil	starch	
ANDERSON CLASSIC	ELITE 5507	28	182	50	1	9.8	3.9	71.2	94	25	194	52	2	8.9	3.9	65.7	--	--	--	--	--	--	--	
ASGROW	RX 508	21	181	53	1	9.0	5.2	70.3	96	--	--	--	--	--	--	--	--	--	--	--	--	--		
BAYSIDE	Super 103	25	175	53	2	9.7	4.6	70.0	97	--	--	--	--	--	--	--	--	--	--	--	--	--		
BAYSIDE	Super 104	22	179	54	1	9.4	4.7	71.4	93	21	187	55	1	8.8	4.4	65.8	--	--	--	--	--	--		
BAYSIDE	Super 105	23	* 186	51	1	8.8	4.4	72.3	94	--	--	--	--	--	--	--	--	--	--	--	--	--		
BIO GENE	BG 103	22	170	54	1	9.1	4.4	70.8	96	21	172	55	1	8.3	4.2	65.8	--	--	--	--	--	--		
BIO GENE	BT 103	23	174	54	1	9.2	4.0	71.7	89	--	--	--	--	--	--	--	--	--	--	--	--	--		
BIO GENE	BG 1020	22	180	54	1	8.7	4.5	72.5	94	--	--	--	--	--	--	--	--	--	--	--	--	--		
BIO GENE	BG 1050	23	179	54	1	8.9	4.1	73.0	91	--	--	--	--	--	--	--	--	--	--	--	--	--		
BROWN	BR 6850	25	* 186	51	2	9.1	4.5	71.5	93	23	200	52	1	8.4	4.1	66.1	23	185	53	1	8.3	3.8	64.5	
BROWN	BR 6895	28	* 190	50	2	10.0	4.3	70.2	96	26	199	52	1	9.0	4.1	65.3	--	--	--	--	--	--		
CARGILL	4521 Bt	21	* 186	55	1	8.4	4.6	72.7	99	--	--	--	--	--	--	--	--	--	--	--	--	--		
CORN BELT	C 567	24	183	51	4	8.9	4.6	71.5	93	23	200	53	2	8.3	4.1	66.3	23	186	53	2	8.1	3.8	64.6	
DAIRYLAND	STEALTH-1406	25	* 186	50	2	9.5	4.5	70.9	93	23	198	52	2	8.5	4.0	66.1	23	186	53	2	8.4	3.8	64.4	
DAIRYLAND	STEALTH-1410	27	177	51	4	9.0	4.4	70.8	98	25	194	52	2	8.2	4.1	65.9	26	183	52	2	8.4	3.9	63.9	
DAIRYLAND	STEALTH-1507	27	* 184	50	2	9.4	3.8	71.3	96	--	--	--	--	--	--	--	--	--	--	--	--	--		
DAIRYLAND	STEALTH-1606	26	* 192	51	1	9.0	4.2	70.5	96	--	--	--	--	--	--	--	--	--	--	--	--	--		
DEKALB	DKC53-32	22	168	52	1	9.0	5.0	71.2	90	--	--	--	--	--	--	--	--	--	--	--	--	--		
DEKALB	DK 567	26	** 197	52	2	9.3	4.3	70.7	98	24	208	53	2	8.6	4.1	65.6	--	--	--	--	--	--		
GARST/AGRIPRO	8590 IT	26	183	51	3	9.0	4.4	71.3	95	24	200	53	2	8.1	4.3	66.2	--	--	--	--	--	--		
GARST	8640 IT	23	* 189	52	2	8.8	4.6	70.1	94	--	--	--	--	--	--	--	--	--	--	--	--	--		
GEERTSON	GS 1067	22	168	52	1	8.9	4.8	70.6	97	22	186	53	1	8.2	4.4	65.7	23	178	53	2	8.2	4.1	64.1	
GEERTSON	GS 1099	28	175	53	1	9.6	4.2	72.0	90	26	192	54	1	8.6	4.2	66.4	--	--	--	--	--	--		
GENESIS	2A06	24	* 193	50	2	8.8	4.6	71.6	93	--	--	--	--	--	--	--	--	--	--	--	--	--		
GOLDEN HARVEST	H-8290	22	178	51	1	8.7	4.0	71.4	93	--	--	--	--	--	--	--	--	--	--	--	--	--		
GREAT LAKES	5420	24	* 187	51	1	9.0	3.8	72.0	95	--	--	--	--	--	--	--	--	--	--	--	--	--		
GREAT LAKES	5668	26	* 188	52	2	8.7	4.7	70.1	98	--	--	--	--	--	--	--	--	--	--	--	--	--		
GREAT LAKES	5675	23	* 193	51	2	9.7	4.6	70.8	90	--	--	--	--	--	--	--	--	--	--	--	--	--		
HIGH CYCLE	HC 350	26	* 188	50	2	8.8	4.1	72.8	93	--	--	--	--	--	--	--	--	--	--	--	--	--		
HIGH CYCLE	7529 Bt	21	* 184	54	1	9.5	4.6	71.2	96	22	190	55	1	9.0	4.4	65.5	--	--	--	--	--	--		
LG SEEDS	LG 2521	25	178	51	2	8.8	4.7	71.2	94	--	--	--	--	--	--	--	--	--	--	--	--	--		
MIDWEST GENETIC	G 7366	24	171	52	1	9.8	4.4	70.5	96	--	--	--	--	--	--	--	--	--	--	--	--	--		
MYCOGEN	2657	25	* 187	51	1	9.0	4.6	71.1	90	--	--	--	--	--	--	--	--	--	--	--	--	--		
NOVARTIS	N 4640 Bt	22	167	54	3	8.8	4.3	71.6	95	21	181	56	2	8.5	4.2	65.9	20	170	57	1	8.6	3.9	64.6	
NOVARTIS	N 57-E3	27	* 190	52	1	8.5	4.4	72.3	95	26	200	53	1	8.0	4.2	66.7	25	185	54	1	8.0	4.0	64.8	
NOVARTIS	N 58-D1	27	179	50	1	8.8	4.5	71.1	97	25	196	52	1	8.1	4.0	66.3	--	--	--	--	--	--		
PIONEER	34G82	26	* 187	52	1	8.6	4.6	71.9	97	24	197	53	1	8.1	4.2	66.5	--	--	--	--	--	--		
PIONEER	35P12	25	* 193	51	2	9.7	4.4	70.6	98	--	--	--	--	--	--	--	--	--	--	--	--	--		
PIONEER	36B08	24	* 187	54	1	9.2	3.7	71.7	95	--	--	--	--	--	--	--	--	--	--	--	--	--		
PIONEER	36G12	22	* 184	55	2	8.9	4.6	71.2	94	22	198	56	1	8.3	4.3	65.9	--	--	--	--	--	--		
PRO SEED	PST 467-A	26	178	50	1	9.0	4.1	71.9	89	--	--	--	--	--	--	--	--	--	--	--	--	--		
PRO SEED	PST 467-C	27	176	50	1	9.0	4.2	71.8	89	--	--	--	--	--	--	--	--	--	--	--	--	--		
RENK	RK 768	22	175	54	1	9.2	4.3	71.7	92	--	--	--	--	--	--	--	--	--	--	--	--	--		
RENK	RK 778	27	182	51	1	9.7	4.0	71.1	93	25	194	52	1	8.9	4.0	65.7	25	185	52	2	8.9	3.8	63.9	
RENK	RK 806	28	* 192	50	1	8.8	4.4	70.7	96	--	--	--	--	--	--	--	--	--	--	--	--	--		
RENK	RK 837	27	173	50	2	9.3	4.6	70.4	89	--	--	--	--	--	--	--	--	--	--	--	--	--		
RUPP	XR 1682	28	176	51	2	9.6	4.2	70.8	94	25	191	52	1	8.9	4.1	65.4	25	178	53	2	9.0	3.9	63.6	
RUPP	XR 8104 Bt	27	177	52	1	9.2	4.4	71.9	97	25	180	54	1	8.7	4.2	66.1	--	--	--	--	--	--		
RUPP	8 XP 73 Bt	29	* 191	49	1	9.5	4.0	71.2	97	--	--	--	--	--	--	--	--	--	--	--	--	--		
STEYER	NC 100F	19	168	53	1	9.8	4.4	69.9	91	--	--	--	--	--	--	--	--	--	--	--	--	--		
TRELAY	7001	28	* 193	50	0	9.0	4.0	70.8	94	--	--	--	--	--	--	--	--	--	--	--	--	--		
TRELAY	7095	27	177	50	1	9.4	4.0	70.8	95	--	--	--	--	--	--	--	--	--	--	--	--	--		
VIGORO	V 4400	18	164	53	1	9.6	4.6	69.8	97	--	--	--	--	--	--	--	--	--	--	--	--	--		
AVERAGE		25	182	52	1	9.1	4.4	71.2	94	24	193	53	1	8.5	4.2	65.9	24	182	53	2	8.4	3.9	64.3	
HIGHEST		29	197	55	4	10.0	5.2	73.0	99	26	208	56	2	9.0	4.4	66.7	26	186	57	2	9.0	4.1	64.8	
LOWEST		18	164	49	0	8.4	3.7	69.7	89	21	172	52	1	8.0	3.9	65.3	20	170	52	1	8.0	3.8	63.6	
Least Significant Difference (LSD) .05%		2	13	2		0.7	0.4	1.3																
CV		5	5	2		4.9	7.2	1.3																

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID



TABLE 2L

## INDIVIDUAL COUNTY GRAIN TRIALS - KENT, INGHAM &amp; SAGINAW - LATE (&gt;102 Day)

ZONE 2

		KENT							INGHAM							SAGINAW						
HYBRID		%	Bushels/Acre			TEST	%	%	%	Bushels/Acre			TEST	%	%	%	Bushels/Acre			TEST	%	%
BRAND	VARIETY	H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD
ANDERSON CLASSIC	ELITE 5507	30	180	201	--	49	1	93	26	* 189	193	--	53	3	94	27	177	187	--	50	0	95
ASGROW	RX 508	25	169	--	--	48	1	93	19	* 189	--	--	56	2	96	19	183	--	--	54	1	98
BAYSIDE	Super 103	30	160	--	--	50	0	93	22	186	--	--	54	3	99	22	179	--	--	55	2	100
BAYSIDE	Super 104	28	189	187	--	51	1	95	21	184	186	--	55	2	92	18	163	188	--	55	0	90
BAYSIDE	Super 105	28	168	--	--	47	1	91	21	* 194	--	--	52	2	93	21	* 196	--	--	52	1	97
BIO GENE	BG 103	26	161	169	--	50	2	94	21	176	174	--	55	2	97	19	174	172	--	56	1	97
BIO GENE	BT 103	27	166	--	--	50	1	88	21	188	--	--	56	1	91	20	170	--	--	55	0	88
BIO GENE	BG 1020	27	182	--	--	50	0	93	20	* 189	--	--	56	3	93	17	170	--	--	55	1	96
BIO GENE	BG 1050	29	175	--	--	51	0	87	20	* 196	--	--	57	2	95	19	165	--	--	55	0	92
BROWN	BR 6850	29	181	198	177	49	3	91	23	* 194	195	197	52	2	92	22	184	206	182	51	0	96
BROWN	BR 6895	32	179	194	--	49	1	96	26	* 192	195	--	52	4	95	25	* 199	206	--	51	0	98
CARGILL	4521 Bt	23	172	--	--	51	2	98	19	* 198	--	--	56	0	99	19	* 189	--	--	56	0	100
CORN BELT	C 567	28	166	191	174	49	7	89	22	* 198	199	198	53	3	94	22	184	210	185	51	1	96
DAIRYLAND	STEALTH-1406	29	179	195	178	48	3	90	22	* 199	197	197	53	2	94	23	179	202	182	50	1	94
DAIRYLAND	STEALTH-1410	31	171	190	177	49	9	99	25	182	197	198	52	1	97	25	176	197	175	50	1	98
DAIRYLAND	STEALTH-1507	30	181	--	--	49	2	98	26	184	--	--	50	2	94	26	186	--	--	50	1	96
DAIRYLAND	STEALTH-1606	28	* 190	--	--	50	1	94	25	* 193	--	--	53	3	99	26	* 193	--	--	51	0	95
DEKALB	DKC53-32	27	163	--	--	48	2	89	20	175	--	--	54	0	89	20	167	--	--	53	0	91
DEKALB	DK 567	30	* 200	213	--	50	2	96	24	** 204	207	--	54	4	99	24	187	204	--	52	1	98
GARST/AGRIPRO	8590 IT	29	183	202	--	49	2	95	24	180	194	--	53	6	94	25	187	203	--	52	2	96
GARST	8640 IT	26	181	--	--	49	1	94	21	* 200	--	--	55	2	93	21	186	--	--	53	2	97
GEERTSON	GS 1067	26	163	187	176	48	2	98	20	176	180	184	54	2	95	19	165	190	175	53	0	99
GEERTSON	GS 1099	31	174	189	--	51	1	89	26	185	195	--	54	2	90	26	167	192	--	53	0	92
GENESIS	2A06	29	** 201	--	--	48	1	90	22	* 190	--	--	51	4	97	22	186	--	--	51	1	91
GOLDEN HARVEST	H-8290	26	167	--	--	48	0	88	19	187	--	--	53	3	93	20	181	--	--	52	0	98
GREAT LAKES	5420	28	181	--	--	49	1	92	23	* 196	--	--	53	0	96	23	184	--	--	52	0	97
GREAT LAKES	5668	29	180	--	--	49	1	97	24	* 199	--	--	54	4	99	24	185	--	--	53	2	99
GREAT LAKES	5675	26	* 192	--	--	49	2	92	22	* 198	--	--	53	2	91	22	* 189	--	--	51	1	89
HIGH CYCLE	HC 350	29	182	--	--	49	1	95	25	188	--	--	51	2	89	24	* 194	--	--	51	1	96
HIGH CYCLE	7529 Bt	26	176	183	--	51	0	95	19	* 195	192	--	56	1	97	19	181	194	--	56	0	97
LG SEEDS	LG 2521	29	172	--	--	49	2	89	23	186	--	--	53	2	96	23	175	--	--	51	2	96
MIDWEST GENETIC	G 7366	28	160	--	--	48	0	94	23	175	--	--	53	3	97	22	178	--	--	55	1	96
MYCOGEN	2657	29	172	--	--	48	1	89	23	188	--	--	53	1	89	23	** 201	--	--	52	0	94
NOVARTIS	N 4640 Bt	26	163	184	171	50	10	89	19	176	183	177	58	0	99	21	161	175	161	55	0	98
NOVARTIS	N 57-E3	30	* 184	198	179	50	2	95	25	* 195	196	195	54	1	92	26	* 192	206	182	53	0	98
NOVARTIS	N 58-D1	30	171	197	--	49	2	96	25	173	191	--	51	1	96	27	* 191	199	--	50	0	98
PIONEER	34G82	30	174	193	--	50	3	94	22	* 200	204	--	55	1	98	27	188	195	--	51	0	100
PIONEER	35P12	28	* 191	--	--	49	1	97	23	* 195	--	--	53	3	98	24	* 192	--	--	51	2	99
PIONEER	36B08	28	175	--	--	50	1	94	21	* 195	--	--	57	1	95	22	* 191	--	--	56	0	97
PIONEER	36G12	25	164	193	--	51	5	92	20	* 197	204	--	58	1	95	22	* 189	197	--	55	0	95
PRO SEED	PST 467-A	30	* 184	--	--	48	1	91	24	178	--	--	52	1	86	25	172	--	--	50	0	91
PRO SEED	PST 467-C	30	179	--	--	49	1	88	26	169	--	--	50	2	89	23	180	--	--	51	1	90
RENK	RK 768	27	168	--	--	50	2	90	21	* 190	--	--	57	1	89	18	166	--	--	55	1	96
RENK	RK 778	30	158	184	177	49	2	88	26	* 196	198	197	52	2	95	25	* 192	200	182	51	0	96
RENK	RK 806	31	* 186	--	--	48	0	97	26	* 201	--	--	51	4	95	27	188	--	--	51	0	95
RENK	RK 837	30	168	--	--	49	3	88	25	181	--	--	51	2	88	26	170	--	--	51	2	91
RUPP	XR 1682	31	167	185	171	49	1	92	26	186	196	189	53	3	96	26	176	191	175	50	0	94
RUPP	XR 8104 Bt	30	174	182	--	50	2	93	26	178	179	--	53	0	98	26	178	179	--	52	0	99
RUPP	8 XP 73 Bt	31	180	--	--	49	3	96	27	* 202	--	--	49	0	97	27	* 191	--	--	49	0	99
STEYER	NC 100F	21	163	--	--	50	1	87	19	166	--	--	55	0	94	18	173	--	--	55	1	91
TRELAY	7001	31	* 187	--	--	48	0	90	26	* 202	--	--	51	1	97	28	* 189	--	--	50	0	95
TRELAY	7095	31	160	--	--	50	1	89	25	185	--	--	50	2	98	25	187	--	--	51	0	96
VIGORO	V 4400	19	158	--	--	50	1	95	19	165	--	--	54	1	97	17	169	--	--	55	1	99
AVERAGE		28	175	191	176	49	2	92	23	188	193	192	53	2	94	23	181	195	178	52	1	96
HIGHEST		32	201	213	179	51	10	99	27	204	207	198	58	6	99	28	201	210	185	56	2	100
LOWEST		19	158	169	171	47	0	87	19	165	174	177	49	0	86	17	161	172	161	49	0	88
Least Significant Difference (LSD) .05%		2	17			2			2	15			2			2	12			1		
CV		6	7			3			5	5			3			5	5			2		

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID

HYBRID		2000									2 Year Avg (1999 / 2000)							3 Year Avg (98-00)			
		%	TEST			%	%	%	%	%	%	TEST			%	%	%	%	TEST		
BRAND	VARIETY	H2O	BU/A	WT	SL	prot	oil	starch	STD	H2O	BU/A	WT	SL	prot	oil	starch	H2O	BU/A	WT	SL	
ASGROW	RX 393 YG	21	155	52	0	9.1	4.8	70.6	89	--	--	--	--	--	--	--	--	--	--	--	
BAYSIDE	Super 89	22	153	57	1	9.7	5.2	70.9	93	--	--	--	--	--	--	--	--	--	--	--	
BAYSIDE	1792	23	163	51	2	8.8	4.1	73.3	89	22	172	52	2	8.1	4.2	66.9	23	174	53	2	
BAYSIDE	Super 93	21	* 170	52	2	9.1	4.7	72.3	93	21	179	53	2	8.5	4.4	66.3	22	175	53	2	
BAYSIDE	Super 94	20	157	53	2	9.3	4.6	71.7	91	20	175	54	2	8.7	4.3	65.9	--	--	--	--	
BAYSIDE	Super 96	24	164	52	1	9.6	5.8	69.3	89	--	--	--	--	--	--	--	--	--	--	--	
BIO GENE	BG 090 A	20	153	53	4	9.6	4.5	70.9	89	--	--	--	--	--	--	--	--	--	--	--	
BROWN	BR 4641	25	* 171	51	1	9.9	5.7	69.2	97	24	185	53	1	9.0	4.9	64.7	--	--	--	--	
CARGILL	X 2915	22	145	56	2	9.6	5.3	70.3	90	--	--	--	--	--	--	--	--	--	--	--	
CORN BELT	C 488	25	153	51	4	10.2	4.4	70.9	85	--	--	--	--	--	--	--	--	--	--	--	
DAIRYLAND	STEALTH-1297	25	164	52	1	9.8	4.6	71.4	92	24	179	53	2	9.3	4.2	65.6	24	178	54	2	
DAIRYLAND	STEALTH-1490	21	164	52	0	10.4	4.6	70.7	92	--	--	--	--	--	--	--	--	--	--	--	
DAIRYLAND	STEALTH-1492	22	142	51	2	11.1	4.7	69.2	91	--	--	--	--	--	--	--	--	--	--	--	
DAIRYLAND	STEALTH-1585	20	150	57	1	9.8	4.4	70.8	84	--	--	--	--	--	--	--	--	--	--	--	
DAIRYLAND	STEALTH-1596	20	163	53	3	9.4	4.2	71.9	90	--	--	--	--	--	--	--	--	--	--	--	
DEKALB	DKC42-22	21	* 172	54	1	8.9	4.9	70.8	92	--	--	--	--	--	--	--	--	--	--	--	
DEKALB	DK 427	20	* 171	55	1	8.9	4.9	71.2	95	21	178	55	2	8.0	4.3	66.3	--	--	--	--	
DEKALB	DKC44-42	22	* 176	51	0	8.5	4.8	72.2	95	--	--	--	--	--	--	--	--	--	--	--	
DEKALB	DKC46-26	22	161	54	3	8.3	4.6	72.8	87	--	--	--	--	--	--	--	--	--	--	--	
DEKALB	DKC47-72	21	154	53	0	9.3	4.7	71.4	95	--	--	--	--	--	--	--	--	--	--	--	
DYNA-GRO	DG-5222	23	167	52	1	9.6	4.4	72.6	85	--	--	--	--	--	--	--	--	--	--	--	
GARST/AGRIPRO	8830	22	167	51	2	8.9	4.0	73.8	90	22	178	52	2	8.0	4.2	67.2	22	178	52	2	
GENESIS	1996	20	160	53	2	9.1	4.4	71.5	93	20	176	54	2	8.4	4.3	66.0	--	--	--	--	
GENESIS	3A88	20	159	58	2	10.3	4.7	70.4	93	--	--	--	--	--	--	--	--	--	--	--	
GENESIS	3A95	21	149	51	3	9.2	4.0	72.8	86	--	--	--	--	--	--	--	--	--	--	--	
GOLDEN HARVEST	H-6675	23	* 174	57	2	10.7	4.0	70.9	93	--	--	--	--	--	--	--	--	--	--	--	
GOLDEN HARVEST	Ex 96477	21	162	56	1	10.6	4.2	70.1	96	--	--	--	--	--	--	--	--	--	--	--	
GOLDEN HARVEST	Ex 97153	23	161	52	1	10.3	4.9	70.4	95	--	--	--	--	--	--	--	--	--	--	--	
GREAT LAKES	4526	22	166	52	1	9.7	4.4	71.9	83	21	178	53	2	8.7	4.2	66.2	22	177	53	2	
GREAT LAKES	4648	21	159	53	2	9.2	5.1	71.0	94	--	--	--	--	--	--	--	--	--	--	--	
HIGH CYCLE	7434 RR	22	* 173	53	1	9.4	4.6	72.5	91	--	--	--	--	--	--	--	--	--	--	--	
LG SEEDS	LG 2307	22	141	58	6	11.0	5.7	69.0	91	--	--	--	--	--	--	--	--	--	--	--	
LG SEEDS	LG 2442	21	* 179	52	1	9.5	4.5	72.1	97	21	182	53	1	8.8	4.3	66.1	21	181	53	2	
LG SEEDS	LG 2473	24	167	51	1	9.6	5.6	69.8	96	24	182	52	1	8.7	4.8	65.2	24	179	53	1	
MIDWEST GENETIC	G 6956	20	153	53	3	9.3	4.5	71.5	88	21	172	53	2	8.5	4.3	66.0	--	--	--	--	
MYCOGEN	X 20461	19	134	53	1	9.6	3.9	71.3	77	--	--	--	--	--	--	--	--	--	--	--	
NOVARTIS	N 2555 Bt	21	161	56	0	9.3	5.0	71.4	95	21	178	56	1	8.6	4.6	65.9	--	--	--	--	
NOVARTIS	N 27-M3	20	152	57	1	10.0	4.7	71.2	96	--	--	--	--	--	--	--	--	--	--	--	
NOVARTIS	N 3030 Bt	21	165	55	0	9.8	5.0	70.9	97	22	181	55	1	8.8	4.6	65.7	23	182	55	1	
PIONEER	37J99	25	** 180	51	2	9.2	5.0	71.3	96	23	187	52	2	8.7	4.6	65.7	--	--	--	--	
PIONEER	38P05	21	165	56	2	10.5	4.6	70.0	92	22	178	56	2	9.3	4.2	65.2	22	178	56	1	
PIONEER	38P06	22	158	54	0	10.1	4.3	70.9	87	22	176	54	0	9.4	4.2	65.3	--	--	--	--	
PIONEER	38A24	23	* 172	54	0	9.1	4.4	71.6	95	--	--	--	--	--	--	--	--	--	--	--	
PIONEER	38T27	23	* 175	54	1	10.2	4.5	70.4	93	--	--	--	--	--	--	--	--	--	--	--	
RENK	RK 569	24	* 171	52	1	10.0	5.7	69.2	94	23	186	53	2	8.9	4.8	64.9	--	--	--	--	
RUPP	XR 1357	22	152	53	0	10.2	4.2	70.7	91	21	163	54	1	9.2	4.1	65.4	21	163	54	1	
TRELAY	3007	20	136	53	3	9.3	5.2	70.1	81	--	--	--	--	--	--	--	--	--	--	--	
TRELAY	4001	20	153	53	2	9.3	4.5	71.4	92	21	175	53	2	8.5	4.3	65.9	--	--	--	--	
TRELAY	4002	21	165	52	1	9.3	4.5	72.2	85	21	181	53	2	8.5	4.4	66.3	22	181	53	2	
VIGORO	V 3200	21	160	55	2	10.5	4.2	70.7	95	--	--	--	--	--	--	--	--	--	--	--	
AVERAGE		22	161	53	2	9.6	4.7	71.1	91	22	178	54	2	8.7	4.4	65.8	22	177	53	1	
HIGHEST		25	180	58	6	11.1	5.8	73.8	97	24	187	56	2	9.4	4.9	67.2	24	182	56	2	
LOWEST		19	134	51	0	8.3	3.9	69.0	77	20	163	52	0	8.0	4.1	64.7	21	163	52	1	
Least Significant Difference (LSD) .05%		1	12	1		0.5	0.5	1.3													
CV		3	5	2		3.4	6.0	1.1													

Least Significant Difference (LSD) .05%

CV      3      5      2      3.4      6.0      1.1

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID

TABLE 3E

## INDIVIDUAL COUNTY GRAIN TRIALS - HURON, MONTCALM &amp; MASON (&lt;97 Day)

ZONE 3

		HURON							MONTCALM							MASON						
HYBRID		%	Bushels/Acre			TEST	%	%	%	Bushels/Acre			TEST	%	%	%	Bushels/Acre			TEST	%	%
BRAND	VARIETY	H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD
ASGROW	RX 393 YG	20	166	--	--	54	0	97	21	152	--	--	50	0	95	22	149	--	--	51	0	74
BAYSIDE	Super 89	20	154	--	--	57	2	97	23	162	--	--	56	0	97	23	142	--	--	57	0	85
BAYSIDE	1792	22	* 170	172	169	52	2	93	22	163	172	170	50	2	94	24	157	171	183	52	1	79
BAYSIDE	Super 93	20	* 172	173	162	53	4	95	22	* 171	185	172	50	3	98	22	* 166	178	190	52	1	86
BAYSIDE	Super 94	19	162	172	--	54	4	92	20	156	185	--	51	1	97	21	154	169	--	54	1	85
BAYSIDE	Super 96	23	161	--	--	53	2	90	24	169	--	--	52	0	97	25	163	--	--	52	1	82
BIO GENE	BG 090 A	19	154	--	--	54	4	93	20	153	--	--	51	3	94	21	151	--	--	53	6	79
BROWN	BR 4641	24	* 173	178	--	52	3	96	25	161	189	--	50	0	98	25	* 180	187	--	52	0	97
CARGILL	X 2915	20	151	--	--	58	2	96	23	153	--	--	55	1	94	24	131	--	--	56	2	79
CORN BELT	C 488	24	162	--	--	53	3	94	25	159	--	--	51	2	89	26	140	--	--	49	7	73
DAIRYLAND	STEALTH-1297	24	168	170	169	53	2	95	25	160	182	175	50	1	96	26	164	183	189	52	1	85
DAIRYLAND	STEALTH-1490	20	162	--	--	53	0	96	21	168	--	--	53	0	97	22	161	--	--	52	1	83
DAIRYLAND	STEALTH-1492	20	146	--	--	52	3	97	23	143	--	--	51	2	93	22	138	--	--	52	1	82
DAIRYLAND	STEALTH-1585	20	136	--	--	58	0	91	20	170	--	--	56	1	89	21	143	--	--	58	1	71
DAIRYLAND	STEALTH-1596	19	165	--	--	55	8	95	20	169	--	--	52	1	96	21	154	--	--	53	1	80
DEKALB	DKC42-22	19	* 171	--	--	56	1	96	20	168	--	--	53	0	98	22	* 177	--	--	54	0	83
DEKALB	DK 427	19	* 172	175	--	56	2	99	20	165	178	--	54	0	98	21	* 175	181	--	55	1	89
DEKALB	DKC44-42	21	* 175	--	--	53	1	99	22	* 175	--	--	50	0	100	23	* 178	--	--	52	0	86
DEKALB	DKC46-26	20	163	--	--	56	3	92	22	161	--	--	52	2	89	23	159	--	--	54	3	80
DEKALB	DKC47-72	20	158	--	--	54	1	98	21	149	--	--	52	0	99	24	157	--	--	52	0	87
DYNA-GRO	DG-5222	23	167	--	--	52	2	93	22	170	--	--	51	2	88	23	165	--	--	54	1	74
GARST/AGRIPRO	8830	22	163	169	167	51	2	95	21	* 171	187	180	51	2	96	23	* 167	179	188	51	2	80
GENESIS	1996	19	158	167	--	54	3	95	20	162	184	--	52	2	98	21	159	178	--	54	1	87
GENESIS	3A88	19	158	--	--	58	2	96	19	163	--	--	57	1	94	21	156	--	--	57	2	87
GENESIS	3A95	19	150	--	--	52	6	91	21	147	--	--	50	2	92	22	151	--	--	52	0	75
GOLDEN HARVEST	H-6675	22	163	--	--	57	4	96	23	* 183	--	--	56	0	94	23	* 177	--	--	58	0	88
GOLDEN HARVEST	Ex 96477	19	159	--	--	56	3	99	21	163	--	--	55	1	98	22	165	--	--	56	0	92
GOLDEN HARVEST	Ex 97153	23	159	--	--	53	1	97	23	162	--	--	51	2	98	24	161	--	--	53	1	89
GREAT LAKES	4526	21	159	170	167	52	3	92	22	* 175	190	178	51	2	93	22	163	174	188	54	0	65
GREAT LAKES	4648	19	159	--	--	54	3	94	20	159	--	--	51	1	96	22	159	--	--	52	0	93
HIGH CYCLE	7434 RR	21	168	--	--	53	2	96	23	* 174	--	--	52	1	97	22	* 178	--	--	54	0	82
LG SEEDS	LG 2307	21	140	--	--	60	5	95	23	146	--	--	57	5	97	24	136	--	--	56	7	81
LG SEEDS	LG 2442	20	* 177	176	174	52	2	99	22	* 180	190	173	50	1	99	21	* 180	181	195	52	0	91
LG SEEDS	LG 2473	23	* 172	181	167	53	0	99	25	166	186	177	50	0	99	26	165	180	193	51	1	90
MIDWEST GENETIC	G 6956	20	156	166	--	54	5	93	20	147	179	--	51	2	95	21	155	172	--	54	1	77
MYCOGEN	X 20461	19	139	--	--	54	3	86	18	132	--	--	52	0	78	20	132	--	--	52	0	69
NOVARTIS	N 2555 Bt	19	166	180	--	58	0	99	19	146	176	--	55	0	97	24	* 169	178	--	55	1	88
NOVARTIS	N 27-M3	19	156	--	--	60	1	99	19	150	--	--	56	1	100	23	149	--	--	55	2	87
NOVARTIS	N 3030 Bt	19	160	176	173	56	0	97	20	152	181	177	54	1	97	25	** 182	187	197	54	0	97
PIONEER	37J99	23	** 181	180	--	51	4	95	25	** 184	193	--	50	2	100	25	* 175	189	--	50	1	92
PIONEER	38P05	21	* 169	178	172	56	1	96	21	164	182	177	54	0	98	23	161	175	186	57	4	81
PIONEER	38P06	21	165	171	--	54	0	94	21	163	188	--	52	0	93	23	146	170	--	54	0	74
PIONEER	38A24	23	* 174	--	--	54	0	95	23	169	--	--	53	0	99	23	* 172	--	--	55	1	91
PIONEER	38T27	22	* 176	--	--	55	2	95	22	* 180	--	--	54	2	99	23	* 168	--	--	55	0	85
RENK	RK 569	23	164	178	--	53	1	94	24	166	189	--	50	2	97	25	* 181	190	--	53	1	91
RUPP	XR 1357	21	160	161	157	54	1	96	22	154	170	161	51	0	97	22	143	157	169	53	0	81
TRELAY	3007	18	152	--	--	55	5	88	20	134	--	--	52	2	93	23	122	--	--	51	1	61
TRELAY	4001	19	155	168	--	54	5	96	20	150	184	--	52	2	95	21	155	173	--	53	1	84
TRELAY	4002	21	* 174	182	177	53	2	95	21	* 176	190	179	52	2	95	23	145	171	187	52	1	66
VIGORO	V 3200	20	162	--	--	56	3	98	21	154	--	--	54	3	99	21	164	--	--	57	0	90
AVERAGE		21	162	173	168	54	2	95	21	161	184	174	52	1	96	23	159	177	188	53	1	83
HIGHEST		24	181	182	177	60	8	99	25	184	193	180	57	5	100	26	182	190	197	58	7	97
LOWEST		18	136	161	157	51	0	86	18	132	170	161	50	0	78	20	122	157	169	49	0	61
Least Significant Difference (LSD) .05%		1	12			1			1	13			2			1	16			2		
CV		4	5			1			3	6			3			4	7			3		

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID



**TABLE 3L AVERAGE OF HURON, MONTCALM & MASON COUNTY GRAIN TRIALS - LATE (>98 Day) ZONE 3**

BRAND	HYBRID VARIETY	2000								2 Year Avg (1999 / 2000)							3 Year Avg (98-00)			
		% H2O	TEST BU/A	% WT	% SL	% prot	% oil	% starch	% STD	% H2O	TEST BU/A	% WT	% SL	% prot	% oil	% starch	% H2O	TEST BU/A	% WT	% SL
ASGROW	RX 452 YG	26	158	51	1	9.4	4.6	71.1	87	--	--	--	--	--	--	--	--	--	--	--
BAYSIDE	Super 101	27	161	51	1	9.7	5.8	68.5	97	--	--	--	--	--	--	--	--	--	--	--
BAYSIDE	Super 103	28	* 164	49	1	9.9	4.6	70.5	95	--	--	--	--	--	--	--	--	--	--	--
BAYSIDE	Super 105	27	* 170	48	2	9.7	4.3	70.7	94	--	--	--	--	--	--	--	--	--	--	--
BROWN	BR 5225	28	* 166	50	1	10.6	4.8	69.6	91	--	--	--	--	--	--	--	--	--	--	--
BROWN	BR 6574	22	141	50	1	10.5	4.3	69.3	95	23	166	51	1	9.3	4.0	64.9	--	--	--	--
CORN BELT	C 51B1 Bt	25	138	49	0	9.9	3.9	70.7	92	--	--	--	--	--	--	--	--	--	--	--
DAIRYLAND	STEALTH-1402	27	162	50	1	10.6	4.0	70.8	92	25	179	51	1	9.9	3.9	65.2	--	--	--	--
DAIRYLAND	STEALTH-1498	24	148	50	2	10.4	4.5	70.8	83	--	--	--	--	--	--	--	--	--	--	--
DAIRYLAND	STEALTH-1502	26	* 171	50	2	9.3	4.9	72.3	92	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DKC48-83	22	* 166	53	1	9.4	4.3	72.1	94	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DKC49-92	23	159	51	0	9.4	5.5	69.2	91	--	--	--	--	--	--	--	--	--	--	--
DEKALB	DK 507	22	* 165	52	2	9.6	4.9	69.6	97	23	184	53	2	8.8	4.5	64.7	--	--	--	--
DEKALB	DKC53-32	28	147	49	1	9.5	5.0	70.8	79	--	--	--	--	--	--	--	--	--	--	--
DYNA-GRO	DG-5308	26	132	49	1	10.1	4.1	70.4	90	--	--	--	--	--	--	--	--	--	--	--
DYNA-GRO	DG-5345	25	* 164	51	1	9.9	4.3	71.5	91	24	175	52	2	--	--	--	--	--	--	--
GARST/AGRIPRO	8707	28	* 174	49	1	10.7	4.6	69.0	90	--	--	--	--	--	--	--	--	--	--	--
GARST	N9734	26	146	50	2	9.0	4.1	73.1	84	--	--	--	--	--	--	--	--	--	--	--
GENESIS	2M100	22	128	50	1	10.7	4.1	69.3	78	--	--	--	--	--	--	--	--	--	--	--
GOLDEN HARVEST	Ex 07807	24	134	49	1	10.7	4.6	68.3	85	--	--	--	--	--	--	--	--	--	--	--
GOLDEN HARVEST	H-7669	27	* 163	49	1	10.8	3.7	70.3	93	--	--	--	--	--	--	--	--	--	--	--
GREAT LAKES	4964	26	* 164	49	2	10.4	4.8	68.5	96	--	--	--	--	--	--	--	--	--	--	--
GREAT LAKES	5162	29	157	47	1	10.5	4.5	69.5	88	--	--	--	--	--	--	--	--	--	--	--
HIGH CYCLE	7525 Bt	24	* 169	52	0	9.5	4.5	71.5	92	--	--	--	--	--	--	--	--	--	--	--
HIGH CYCLE	7561 RR	25	156	49	2	9.3	4.7	71.2	92	--	--	--	--	--	--	--	--	--	--	--
LG SEEDS	LG2484	27	156	51	1	9.7	5.7	68.7	94	--	--	--	--	--	--	--	--	--	--	--
LG SEEDS	LG 2488	28	* 167	51	2	10.3	4.9	69.5	90	--	--	--	--	--	--	--	--	--	--	--
LG SEEDS	LG 2499	28	* 169	49	0	11.2	4.7	68.3	96	26	182	51	1	10.0	4.4	63.9	27	182	51	1
MYCOGEN	2566	27	158	50	1	11.1	4.1	70.1	79	25	180	52	1	9.9	3.9	65.0	--	--	--	--
NOVARTIS	N 45-T5	24	* 163	51	1	9.2	5.3	69.8	86	--	--	--	--	--	--	--	--	--	--	--
PIONEER	36B08	26	* 163	51	2	9.6	3.7	71.5	94	26	180	52	1	9.0	3.7	65.8	--	--	--	--
PIONEER	36G12	26	* 174	51	1	9.3	4.4	71.0	92	25	192	53	1	8.6	4.1	65.9	--	--	--	--
PIONEER	37M34	24	** 176	54	2	10.0	4.3	70.9	98	24	187	55	1	9.3	4.0	65.6	--	--	--	--
PIONEER	37R71	26	** 176	50	0	9.4	5.4	70.1	96	25	182	51	1	8.8	4.8	65.0	24	180	52	1
RENK	RK 606	24	155	54	2	9.2	4.4	71.7	95	23	168	55	2	8.2	4.1	66.4	--	--	--	--
RENK	RK 685	22	145	50	2	10.5	4.2	69.5	96	--	--	--	--	--	--	--	--	--	--	--
RENK	RK 695	22	143	49	2	9.9	4.2	69.9	96	--	--	--	--	--	--	--	--	--	--	--
RUPP	XR 1583	22	146	50	2	10.3	4.6	70.0	96	22	165	51	2	9.2	4.1	65.3	--	--	--	--
TRELAY	5100	27	* 167	50	1	9.7	4.4	70.7	90	--	--	--	--	--	--	--	--	--	--	--
TRELAY	5600	23	* 168	55	2	9.4	4.1	71.6	94	23	173	55	3	8.4	4.0	66.3	--	--	--	--
AVERAGE		25	158	50	1	10.0	4.5	70.3	91	24	178	53	1	8.4	3.8	60.3	25	181	51	1
HIGHEST		29	176	55	2	11.2	5.8	73.1	98	26	192	55	3	10.0	4.8	66.4	27	182	52	1
LOWEST		22	128	47	0	9.0	3.7	68.3	78	22	165	51	1	8.2	3.7	63.9	24	180	51	1
Least Significant Difference (LSD) .05%		2	13	1		0.8	0.4	1.5												
CV		4	5	1		4.6	5.3	1.3												

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID

TABLE 3L

## INDIVIDUAL COUNTY GRAIN TRIALS - HURON, MONTCALM &amp; MASON - LATE (&gt;98 Day)

ZONE 3

BRAND	HYBRID VARIETY	HURON							MONTCALM							MASON						
		% H2O	Bushels/Acre 2000	2Yr	3Yr	TEST WT	% SL	% STD	% H2O	Bushels/Acre 2000	2Yr	3Yr	TEST WT	% SL	% STD	% H2O	Bushels/Acre 2000	2Yr	3Yr	TEST WT	% SL	% STD
ASGROW	RX 452 YG	26	154	--	--	51	1	88	25	163	--	--	51	3	95	28	157	--	--	50	0	78
BAYSIDE	Super 101	26	* 169	--	--	52	1	97	26	151	--	--	50	1	97	28	165	--	--	50	0	96
BAYSIDE	Super 103	29	* 170	--	--	50	2	96	27	164	--	--	48	0	99	29	158	--	--	49	0	91
BAYSIDE	Super 105	27	* 177	--	--	49	4	95	28	161	--	--	47	1	95	27	* 173	--	--	48	0	91
BROWN	BR 5225	28	* 171	--	--	51	1	95	27	170	--	--	50	3	94	28	157	--	--	50	0	85
BROWN	BR 6574	21	143	161	--	51	2	96	22	128	161	--	49	1	99	25	153	177	--	50	0	89
CORN BELT	C 51B1 Bt	24	143	--	--	49	1	93	24	126	--	--	48	0	98	27	144	--	--	49	0	84
DAIRYLAND	STEALTH-1402	28	* 167	170	--	49	2	94	24	158	183	--	50	0	94	28	161	184	--	49	0	88
DAIRYLAND	STEALTH-1498	22	157	--	--	51	2	93	23	152	--	--	50	2	81	28	137	--	--	49	1	75
DAIRYLAND	STEALTH-1502	26	* 169	--	--	51	5	96	25	171	--	--	49	1	99	28	* 173	--	--	49	1	82
DEKALB	DKC48-83	21	* 165	--	--	53	3	96	21	163	--	--	53	1	99	25	* 170	--	--	51	0	85
DEKALB	DKC49-92	22	* 171	--	--	53	0	96	23	154	--	--	51	1	95	25	153	--	--	50	0	82
DEKALB	DK 507	20	* 174	180	--	54	3	98	22	154	181	--	52	3	100	25	167	191	--	51	0	94
DEKALB	DKC53-32	28	152	--	--	49	0	94	26	144	--	--	49	2	74	29	146	--	--	48	0	68
DYNA-GRO	DG-5308	25	140	--	--	50	1	97	25	120	--	--	48	1	94	27	135	--	--	49	0	78
DYNA-GRO	DG-5345	27	157	167	--	51	2	95	23	175	190	--	51	2	96	26	161	167	--	51	1	82
GARST/AGRIPRO	8707	28	* 176	--	--	50	1	93	26	173	--	--	49	0	95	28	* 172	--	--	50	0	81
GARST	N9734	24	159	--	--	51	3	95	24	137	--	--	50	1	87	28	141	--	--	49	2	69
GENESIS	2M100	20	134	--	--	51	1	91	21	121	--	--	50	0	81	26	128	--	--	49	1	62
GOLDEN HARVEST	Ex 07807	23	134	--	--	50	3	94	22	135	--	--	49	1	89	26	133	--	--	49	1	74
GOLDEN HARVEST	H-7669	27	* 168	--	--	50	1	94	26	157	--	--	48	1	99	27	164	--	--	49	0	85
GREAT LAKES	4964	25	* 170	--	--	49	4	95	25	159	--	--	48	2	99	26	163	--	--	49	1	92
GREAT LAKES	5162	29	* 173	--	--	48	2	93	28	151	--	--	47	2	91	30	148	--	--	48	0	81
HIGH CYCLE	7525 Bt	24	* 174	--	--	52	0	96	23	170	--	--	52	0	96	25	163	--	--	51	0	83
HIGH CYCLE	7561 RR	24	156	--	--	49	3	96	23	158	--	--	49	2	95	26	154	--	--	48	1	86
LG SEEDS	LG2484	26	164	--	--	52	1	94	26	148	--	--	50	1	98	28	155	--	--	51	0	91
LG SEEDS	LG 2488	28	* 171	--	--	51	3	95	27	171	--	--	51	2	94	28	159	--	--	50	0	83
LG SEEDS	LG 2499	29	* 173	175	170	49	1	100	27	170	187	178	48	0	100	28	165	182	197	49	0	89
MYCOGEN	2566	28	* 165	179	--	50	1	83	24	156	182	--	51	0	82	28	154	179	--	50	1	73
NOVARTIS	N 45-T5	23	* 165	--	--	51	0	90	22	169	--	--	51	0	91	27	154	--	--	50	1	75
PIONEER	36B08	26	* 171	176	--	52	3	97	24	154	182	--	50	2	96	27	163	180	--	50	1	90
PIONEER	36G12	27	** 178	182	--	52	3	94	24	170	198	--	52	0	96	27	* 173	195	--	51	0	87
PIONEER	37M34	24	* 176	181	--	54	3	98	23	170	188	--	53	0	99	24	** 183	192	--	55	1	96
PIONEER	37R71	26	* 169	179	175	50	0	98	26	** 188	187	178	50	0	100	27	* 172	180	188	49	0	89
RENK	RK 606	24	161	164	--	55	3	95	22	144	168	--	54	2	96	25	161	172	--	53	0	93
RENK	RK 685	21	143	--	--	51	4	96	21	138	--	--	50	0	98	26	153	--	--	49	1	92
RENK	RK 695	21	143	--	--	50	3	94	22	126	--	--	48	3	97	25	162	--	--	49	0	95
RUPP	XR 1583	21	148	162	--	51	3	98	21	130	159	--	50	1	99	25	158	176	--	50	0	92
TRELAY	5100	27	158	--	--	51	3	84	26	161	--	--	49	1	95	27	* 181	--	--	50	0	90
TRELAY	5600	23	* 169	168	--	56	1	97	22	171	178	--	55	3	97	25	162	173	--	54	1	86
AVERAGE		25	162	173	173	51	2	94	24	154	180	178	50	1	94	27	158	181	192	50	0	85
HIGHEST		29	178	182	175	56	5	100	28	188	198	178	55	3	100	30	183	195	197	55	2	96
LOWEST		20	134	161	170	48	0	83	21	120	159	178	47	0	74	24	128	167	188	48	0	62
Least Significant Difference (LSD) .05%		1	13			1			2	12			1			1	14			1		
CV		4	6			1			4	6			2			3	6			2		

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID



TABLE 4

## AVERAGE OF ALPENA, GRAND TRAVERSE &amp; DELTA COUNTY GRAIN TRIALS

ZONE 4

		2000									2 Year Avg (1999 / 2000)							3 Year Avg (98-00)				
HYBRID		%	TEST			%	%	%	%	%	%	TEST			%	%	%	%	TEST			%
BRAND	VARIETY	H2O	BU/A	WT	SL	prot	oil	starch	STD	H2O	BU/A	WT	SL	prot	oil	starch	H2O	BU/A	WT	SL		
ASGROW	RX 355 YG	25	97	48	1	10.9	4.5	69.2	76	--	--	--	--	--	--	--	--	--	--	--		
BAYSIDE	Super 75	23 *	115	53	1	10.0	4.8	71.5	90	21	120	55	1	9.8	4.4	65.2	23	112	54	1		
BAYSIDE	Super 82	24	111	49	1	9.6	4.2	70.5	94	--	--	--	--	--	--	--	--	--	--	--		
CARGILL	1710	23	103	51	3	9.6	4.4	71.2	92	--	--	--	--	--	--	--	--	--	--	--		
DEKALB	DK 334 BtY	24	112	50	1	10.6	5.1	68.9	99	--	--	--	--	--	--	--	--	--	--	--		
DEKALB	DKC36-71	24	101	48	1	10.7	5.6	67.9	98	--	--	--	--	--	--	--	--	--	--	--		
DEKALB	DK 389 BtY	24	94	48	1	9.7	5.0	69.5	86	23	108	52	1	9.4	4.5	64.5	--	--	--	--		
DEKALB	DKC39-45	28 *	120	47	1	9.1	5.1	70.7	96	--	--	--	--	--	--	--	--	--	--	--		
DEKALB	DK 405	26 *	118	46	1	9.7	5.2	68.9	97	23	128	49	1	9.2	4.4	64.5	25	125	50	1		
DEKALB	DKC42-22	30 *	123	45	0	9.5	4.7	69.5	92	--	--	--	--	--	--	--	--	--	--	--		
DEKALB	DK 427	29 **	124	46	1	8.8	4.8	70.7	98	25	135	49	1	8.7	4.3	65.3	--	--	--	--		
GENESIS	3A88	21	112	50	1	10.5	4.1	69.7	95	--	--	--	--	--	--	--	--	--	--	--		
GREAT LAKES	3362	24	106	45	1	9.6	4.1	70.3	90	--	--	--	--	--	--	--	--	--	--	--		
GREAT LAKES	3994	24	109	49	1	9.9	4.2	70.6	93	--	--	--	--	--	--	--	--	--	--	--		
GREAT LAKES	4231	26	97	47	1	10.9	4.3	68.6	95	--	--	--	--	--	--	--	--	--	--	--		
LG SEEDS	LG 2354	22	106	50	1	9.6	4.2	70.4	94	--	--	--	--	--	--	--	--	--	--	--		
LG SEEDS	LG 2367	28	112	48	1	10.4	5.3	68.3	98	25	124	52	1	10.0	4.5	63.9	27	114	52	1		
MYCOGEN	2242	24 *	115	49	0	9.5	4.1	71.3	96	22	124	52	1	9.1	4.0	65.6	--	--	--	--		
MYCOGEN	X 29120	27	94	50	5	10.1	5.3	70.3	75	--	--	--	--	--	--	--	--	--	--	--		
PIONEER	38P05	26 *	116	48	2	10.0	4.4	69.7	94	24	125	50	2	9.5	3.9	64.9	--	--	--	--		
PIONEER	38T27	29	109	47	2	10.0	4.5	69.5	96	--	--	--	--	--	--	--	--	--	--	--		
PIONEER	38W36	28 *	123	47	1	9.4	5.3	68.6	94	--	--	--	--	--	--	--	--	--	--	--		
RENK	RK 394	29	99	48	1	9.3	4.1	70.3	96	--	--	--	--	--	--	--	--	--	--	--		
TRELAY	1007	24 *	116	49	1	9.3	4.1	70.7	98	22	126	51	1	8.9	4.1	65.3	23	121	52	1		
TRELAY	2008	29	106	48	1	10.2	5.2	69.2	95	25	117	51	2	9.9	4.5	64.3	--	--	--	--		
TRELAY	2009	24	108	48	2	9.5	5.4	68.2	98	--	--	--	--	--	--	--	--	--	--	--		
WOLF RIVER VALLEY	WRV 9983	25	113	49	1	9.3	4.2	71.0	97	--	--	--	--	--	--	--	--	--	--	--		
AVERAGE		26	110	48	1	9.8	4.7	69.8	93	23	123	51	1	9.4	4.3	64.8	24	118	52	1		
HIGHEST		30	124	53	5	10.9	5.6	71.5	99	25	135	55	2	10.0	4.5	65.6	27	125	54	1		
LOWEST		21	94	45	0	8.8	4.1	68.2	75	21	108	49	1	8.7	3.9	63.9	23	112	50	1		
Least Significant Difference (LSD) .05%		2	9	2		0.7	0.5	1.6														
CV		5	5	2		3.7	5.5	1.4														

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID

**TABLE 4** **INDIVIDUAL COUNTY GRAIN TRIALS - ALPENA, GRAND TRAVERSE & DELTA** **ZONE 4**

		ALPENA							GRAND TRAVERSE							DELTA						
HYBRID		%	Bushels/Acre			TEST	%	%	%	Bushels/Acre			TEST	%	%	%	Bushels/Acre			TEST	%	%
BRAND	VARIETY	H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD	H2O	2000	2Yr	3Yr	WT	SL	STD
ASGROW	RX 355 YG	22	81	--	--	50	1	82	23	112	--	--	51	1	80	29	97	--	--	43	2	66
BAYSIDE	Super 75	23 *	101	116	116	54	1	92	22 *	127	123	107	53	0	91	25	117	152	153	52	1	88
BAYSIDE	Super 82	24	85	--	--	48	0	93	23 *	129	--	--	52	2	94	27 *	118	--	--	46	0	94
CARGILL	1710	24	82	--	--	51	2	92	22	122	--	--	53	4	92	24	106	--	--	50	4	93
DEKALB	DK 334 BtY	24	91	--	--	50	0	100	23	125	--	--	53	1	100	26 *	120	--	--	46	0	99
DEKALB	DKC36-71	24	80	--	--	48	0	100	22	110	--	--	50	3	99	26	114	--	--	45	0	95
DEKALB	DK 389 BtY	22	71	100	--	49	1	90	23	110	112	--	51	1	88	28	102	146	--	45	1	80
DEKALB	DKC39-45	28 *	102	--	--	46	1	99	26 *	132	--	--	49	2	95	30 *	124	--	--	44	0	94
DEKALB	DK 405	26	94	119	129	45	0	95	25 *	131	131	116	48	1	99	28 *	129	162	164	43	2	98
DEKALB	DKC42-22	30 *	106	--	--	45	0	93	28 **	139	--	--	48	0	98	34 *	124	--	--	43	0	86
DEKALB	DK 427	28 *	105	129	--	45	1	100	28 *	135	137	--	47	0	100	29 **	131	--	--	44	1	93
GENESIS	3A88	18	90	--	--	52	1	93	21 *	127	--	--	53	1	98	25 *	120	--	--	47	2	94
GREAT LAKES	3362	22	89	--	--	47	1	91	23	124	--	--	46	1	95	28	105	--	--	42	1	83
GREAT LAKES	3994	22	88	--	--	49	0	99	23 *	128	--	--	51	1	94	26	109	--	--	46	3	85
GREAT LAKES	4231	22	89	--	--	48	0	100	25	105	--	--	49	1	98	31	97	--	--	44	1	87
LG SEEDS	LG 2354	20	92	--	--	52	1	99	20	118	--	--	53	2	93	26	107	--	--	47	0	91
LG SEEDS	LG 2367	28	91	118	117	48	0	96	27	123	125	107	52	1	96	30 *	121	160	163	45	1	100
MYCOGEN	2242	25	91	113	--	49	0	97	23 *	132	131	--	51	0	94	25 *	123	158	--	47	0	98
MYCOGEN	X 29120	27	83	--	--	51	2	86	26	112	--	--	52	3	82	28	86	--	--	47	9	57
PIONEER	38P05	26 *	105	123	--	49	1	98	24 *	127	127	--	50	1	97	29	116	--	--	45	3	86
PIONEER	38T27	28	93	--	--	48	1	99	27	115	--	--	48	3	96	31 *	120	--	--	44	2	92
PIONEER	38W36	28 **	108	--	--	47	0	92	26 *	132	--	--	50	1	95	30 **	131	--	--	44	1	97
RENK	RK 394	28	80	--	--	49	0	95	29	115	--	--	49	1	99	31	101	--	--	45	3	95
TRELAY	1007	24	89	115	119	48	1	99	22 *	137	133	120	51	0	99	26 *	122	155	158	46	2	97
TRELAY	2008	27	88	109	--	48	1	98	28	120	123	--	50	1	98	31	111	156	--	45	2	90
TRELAY	2009	21	85	--	--	49	2	99	24 *	127	--	--	50	2	97	28	113	--	--	44	3	96
WOLF RIVER VALLEY	WRV 9983	25	89	--	--	49	0	97	23 *	129	--	--	51	1	100	26 *	119	--	--	47	2	93
AVERAGE		25	91	116	120	49	1	95	24	124	127	113	50	1	95	28	114	156	160	45	2	90
HIGHEST		30	108	129	129	54	2	100	29	139	137	120	53	4	100	34	131	162	164	52	9	100
LOWEST		18	71	100	116	45	0	82	20	105	112	107	46	0	80	24	86	146	153	42	0	57
Least Significant Difference (LSD) .05%		1	10			2			2	13			2			2	13			1		
CV		4	7			2			5	7			3			5	8			2		

\*\* HIGHEST YIELDING HYBRID

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID

# GRAIN INDEX FOR 2000 CORN HYBRIDS COMPARED

There were 247 hybrids from 32 seed companies tested as 990 individual entries in the 2000 Michigan Corn Performance Trials. The map shows the zones where the hybrids were entered. Early and late hybrid tables are designated by an E or L next to table number. Company names used in association with hybrid numbers refer to the brand and the numbers are the variety (hybrid) designation.

## Table 1E / 1L

Monroe  
Branch - Irrigated  
Cass - Irrigated  
Average

## Table 2E / 2L

Kent  
Ingham  
Saginaw  
Average

## Table 3E / 3L

Huron  
Montcalm - Irrigated  
Mason - Irrigated  
Average

## Table 4E

Alpena  
Grand Traverse  
Delta  
Average

### AgriPro Seeds, Inc.

AGRIPRO AP9340 (1E)  
AGRIPRO AP9466 (1E)

### The Andersons, Inc.

ANDERSON CLASSIC ELITE  
4089 (1E,2E)  
ANDERSON CLASSIC ELITE  
5507 (1L,2L)

### Monsanto Global Seed Co.

ASGROW RX355YG (4E)  
ASGROW RX393YG (2E,3E)  
ASGROW RX452YG (2E,3L)  
ASGROW RX508 (1E,2L)  
ASGROW RX637 (1L)  
ASGROW RX708 (1L)  
ASGROW RX730YG (1L)

### Bayside Seeds

BAYSIDE Super 75 (4E)  
BAYSIDE Super 82 (4E)  
BAYSIDE Super 89 (3E)  
BAYSIDE Super 93 (2E,3E)  
BAYSIDE Super 94 (3E)  
BAYSIDE Super 96 (2E,3E)  
BAYSIDE Super 100 (2E)  
BAYSIDE Super 101 (2E,3L)  
BAYSIDE Super 103 (2L,3L)  
BAYSIDE Super 104 (2L)  
BAYSIDE Super 105 (1E,2L,3L)  
BAYSIDE Super 109 (1L)  
BAYSIDE 1792 (2E,3E)

### Beck's Superior Hybrids

BECK'S 5105 (1E)  
BECK'S 5166 (1E)  
BECK'S 5283Bt1 (1L)  
BECK'S 5305 (1L)  
BECK'S 5322 (1L)

### Bio Gene

BIO GENE BG090A (3E)  
BIO GENE BG095A (2E)  
BIO GENE BG098 (2E)  
BIO GENE BT098 (2E)  
BIO GENE BG103 (2L)  
BIO GENE BT103 (2L)  
BIO GENE BG307 (1L)  
BIO GENE BG309 (1L)  
BIO GENE BT311 (1L)  
BIO GENE BG1020 (2L)  
BIO GENE BG1050 (2L)

### Bio Gene (continued)

BIO GENE BG1070 (1L)  
BIO GENE BG1080 (1L)  
BIO GENE BG1091 (1L)  
BIO GENE BG1100 (1L)

### Brown Seed Farms

BROWN BR 4641 (3E)  
BROWN BR 5225 (3L)  
BROWN BR 5341 (2E)  
BROWN BR 6574 (3L)  
BROWN BR 6850 (1E,2L)  
BROWN BR 6895 (2L)  
BROWN BR 7041 (1L)  
BROWN BR 7044 (1L)

### Cargill Hybrid Seeds

CARGILL 1710 (4E)  
CARGILL X2915 (3E)  
CARGILL 4521BT (1E,2L)  
CARGILL 6888 (1L)

### Corn Belt Hybrids

CORN BELT C 488 (3E)  
CORN BELT C 528 (2E)  
CORN BELT C 567 (2L)  
CORN BELT C 578 (1E)  
CORN BELT C 609 (1L)  
CORN BELT C 611 (1L)  
CORN BELT C 51B1BT (3L)  
CORN BELT C 60F6ND (1E)

### Crow's Hybrid Corn Company

CROW'S 217Bt (2E)  
CROW'S 363 (1L)

### Dairyland Seed Company, Inc.

DAIRYLAND STEALTH-1297 (3E)  
DAIRYLAND STEALTH-1402 (3L)  
DAIRYLAND STEALTH-1406 (1E,2L)  
DAIRYLAND STEALTH-1410 (2L)  
DAIRYLAND STEALTH-1412 (1L)  
DAIRYLAND STEALTH-1490 (3E)  
DAIRYLAND STEALTH-1492 (3E)  
DAIRYLAND STEALTH-1496 (2E)  
DAIRYLAND STEALTH-1498 (3L)  
DAIRYLAND STEALTH-1502 (2E,3L)  
DAIRYLAND STEALTH-1507 (1E,2L)  
DAIRYLAND STEALTH-1585 (3E)  
DAIRYLAND STEALTH-1596 (3E)  
DAIRYLAND STEALTH-1606 (1E,2L)  
DAIRYLAND STEALTH-1609 (1L)

### Monsanto Global Seed Co.

DEKALB DK334BtY (4E)  
DEKALB DKC36-71 (4E)  
DEKALB DKC39-45 (4E)  
DEKALB DK389BtY (4E)  
DEKALB DK405 (4E)  
DEKALB DKC42-22 (2E,3E)  
DEKALB DK427 (3E,4E)  
DEKALB DKC44-42 (2E,3E)  
DEKALB DKC46-26 (2E,3E)  
DEKALB DKC47-72 (2E,3E)  
DEKALB DKC48-83 (2E,3L)  
DEKALB DKC49-92 (2E,3L)  
DEKALB DK507 (1E,2E,3L)  
DEKALB DKC53-32 (1E,2L,3L)  
DEKALB DK567 (1E,2L)  
DEKALB DKC58-52 (1L)  
DEKALB DK595BtY (1L)  
DEKALB DKC61-24 (1L)

### UAP Great Lakes

DYNA-GRO DG5222 (2E,3E)  
DYNA-GRO DG5308 (2E,3L)  
DYNA-GRO DG5322 (1E)  
DYNA-GRO DG5324 (1E)  
DYNA-GRO DG5345 (2E,3L)  
DYNA-GRO DG5352 (1L)  
DYNA-GRO DG-X11000 (1E,2E)

### Garst Seed Co.

GARST/AGRIPRO 8464 (1L)  
GARST/AGRIPRO 8590 (1E,2L)  
GARST/AGRIPRO 8707 (3L)  
GARST/AGRIPRO 8830 (3E)  
GARST 8541IT (1L)  
GARST 8640 (1E,2L)  
GARST 8766 (2E)  
GARST 8780 HpH (2E)  
GARST N9734 (3L)

### Geertson Seed Farms

GEERTSON GS1067 (1E,2L)  
GEERTSON GS1099 (2L)  
GEERTSON GS1117 (2L)

### Genesis Ag Ltd.

GENESIS 1996 (2E,3E)  
GENESIS 2A06 (1E,2L)  
GENESIS 2M06 (1E)  
GENESIS 2M100 (2E,3L)  
GENESIS 3A88 (3E,4E)  
GENESIS 3A95 (3E)



**Golden Harvest/Sommer Bros. Seed Co.**

GOLDEN HARVEST H-6675 (3E)  
 GOLDEN HARVEST H-7669 (2E,3L)  
 GOLDEN HARVEST H-8290 (1E,2L)  
 GOLDEN HARVEST EX96477 (3E)  
 GOLDEN HARVEST EX97153 (2E,3E)  
 GOLDEN HARVEST EX07807 (2E,3L)  
 GOLDEN HARVEST EX08799 (1L)

**Great Lakes Hybrids, Inc.**

GREAT LAKES 3362 (4E)  
 GREAT LAKES 3994 (4E)  
 GREAT LAKES 4231 (4E)  
 GREAT LAKES 4526 (2E,3E)  
 GREAT LAKES 4648 (2E,3E)  
 GREAT LAKES 4964 (2E,3L)  
 GREAT LAKES 5162 (2E,3L)  
 GREAT LAKES 5420 (2L)  
 GREAT LAKES 5668 (2L)  
 GREAT LAKES 5675 (1E,2L)  
 GREAT LAKES 5758 (1L)  
 GREAT LAKES 5816 (1L)

**Gries Seed Farms, Inc.**

GRIES X-700 (1L)

**Gutwein Seed**

GUTWEIN 2515 (1L)  
 GUTWEIN 2520CL (1L)

**Trelay Seed Company**

HIGH CYCLE HC350 (1E,2L)  
 HIGH CYCLE 7434RR (3E)  
 HIGH CYCLE 7525BT (3L)  
 HIGH CYCLE HC7529Bt (2L)  
 HIGH CYCLE 7561RR (3L)  
 HIGH CYCLE 7624RR (1E)  
 HIGH CYCLE 7638BT (1E)  
 HIGH CYCLE 7747BT (1L)

**LG Seeds**

LG SEEDS LG2307 (3E)  
 LG SEEDS LG2354 (4E)  
 LG SEEDS LG2367 (4E)  
 LG SEEDS LG2442 (3E)  
 LG SEEDS LG2473 (2E,3E)  
 LG SEEDS LG2484 (2E,3L)  
 LG SEEDS LG2488 (2E,3L)  
 LG SEEDS LG2499 (2E,3L)  
 LG SEEDS LG2521 (2L)  
 LG SEEDS LG2533 (1E)  
 LG SEEDS LG2583 (1L)  
 LG SEEDS LG2585 (1L)

**Midwest Seed Genetics**

M/W GENETICS G6956 (3E)  
 M/W GENETICS G7366 (2L)  
 M/W GENETICS G7711 (1L)

**Mycogen Plant Sciences**

MYCOGEN 2242 (4E)  
 MYCOGEN 2544IMI (2E)  
 MYCOGEN 2566 (3L)  
 MYCOGEN 2657 (1E,2L)  
 MYCOGEN 2767 (1L)  
 MYCOGEN X20461 (3E)  
 MYCOGEN X29120 (4E)

**Novartis Seeds, Inc.**

NOVARTIS N2555Bt (3E)  
 NOVARTIS 27-M3 (3E)  
 NOVARTIS N3030Bt (2E,3E)  
 NOVARTIS N43-C4 (2E)  
 NOVARTIS N45-T5 (2E,3L)  
 NOVARTIS N4640Bt (2L)  
 NOVARTIS NX5768 (1E)  
 NOVARTIS N57-E3 (1E,2L)  
 NOVARTIS N58-D1 (1E,2L)  
 NOVARTIS N59-Q9 (1E)  
 NOVARTIS N65-A1 (1L)  
 NOVARTIS N70-D5 (1L)

**Pfister Hybrid Corn Co.**

PFISTER 2024 (1E)  
 PFISTER 2025 (1E)

**Pioneer Hi-Bred International, Inc.**

PIONEER 33T90 (1L)  
 PIONEER 34B24 (1L)  
 PIONEER 34K77 (1L)  
 PIONEER 34E79 (1L)  
 PIONEER 34G82 (1E,2L)  
 PIONEER 35P12 (1E,2L)  
 PIONEER 36B08 (2L,3L)  
 PIONEER 36G12 (1E,2L,3L)  
 PIONEER 37M34 (2E,3L)  
 PIONEER 37R71 (2E,3L)  
 PIONEER 37J99 (3E)  
 PIONEER 38P05 (3E,4E)  
 PIONEER 38P06 (2E,3E)  
 PIONEER 38A24 (3E)  
 PIONEER 38T27 (2E,3E,4E)  
 PIONEER 38W36 (4E)

**Pro Seed Technologies, Inc.**

PRO SEED PST467-A (2L)  
 PRO SEED PST467-C (2L)

**Renk Seed Company, Inc.**

RENK RK394 (4E)  
 RENK RK569 (2E,3E)  
 RENK RK606 (2E,3L)  
 RENK RK668 (1E)  
 RENK RK685 (1E,2E,3L)  
 RENK RK695 (2E,3L)  
 RENK RK768 (1L,2L)  
 RENK RK778 (2L)  
 RENK RK806 (1L,2L)  
 RENK RK837 (1L,2L)  
 RENK RK864 (1L)

**Rupp Seeds, Inc.**

RUPP XR 1357 (3E)  
 RUPP XR 1583 (2E,3L)  
 RUPP XR 1682 (1E,2L)  
 RUPP XR 1733 (1L)  
 RUPP XR 8104Bt (2L)  
 RUPP XR 8108Bt (1L)  
 RUPP 8XP73Bt (1E,2L)  
 RUPP 1XP87 (1L)

**Steyer Seeds**

STEYER NC100F (2L)  
 STEYER NC108 (1L)  
 STEYER ST2180 (2E)  
 STEYER ST2380 (1L)

**Trelay Seed Company, Inc.**

TRELAY 1007 (4E)  
 TRELAY 2008 (4E)  
 TRELAY 2009 (4E)  
 TRELAY 3007 (3E)  
 TRELAY 4001 (2E,3E)  
 TRELAY 4002 (2E,3E)  
 TRELAY 5100 (2E,3L)  
 TRELAY 5600 (2E,3L)  
 TRELAY 7001 (2L)  
 TRELAY 7095 (2L)  
 TRELAY 9095 (1L)

**Rovster-Clark, Inc.**

VIGORO V3200 (3E)  
 VIGORO V4400 (2L)  
 VIGORO V4510 (1E)  
 VIGORO V4910 (1L)

**Wolf River Valley Seeds**

WOLF RIVER WRV9983 (4E)

# 2000 SILAGE PERFORMANCE TRIALS

## Introduction

Nine locations (see map) containing 13 silage tests were harvested. The silage index contains a list of all hybrids planted in the 2000 silage trials. The 13 silage tests included 72 hybrids from 19 seed companies (20 Brand names) comprised 231 individual county entries. Company names used in association with hybrid numbers refer to their brands. The numbers are the companies' designations.

New locations in Lenawee and Branch counties (zone 1) were added in 2000, and contained one maturity group with data presented in Table 5E. Trials conducted in Ionia, Ingham, and Huron counties contain two maturity groups with yield data presented in Tables 6E & 6L. Delta county had two silage trials again in 2000. Table 7E compares later maturity hybrids in Delta county with the same hybrids in Alpena and Missaukee counties, while Table 8E compares an earlier maturity group of hybrids in Delta county with the same hybrids in Alger county.

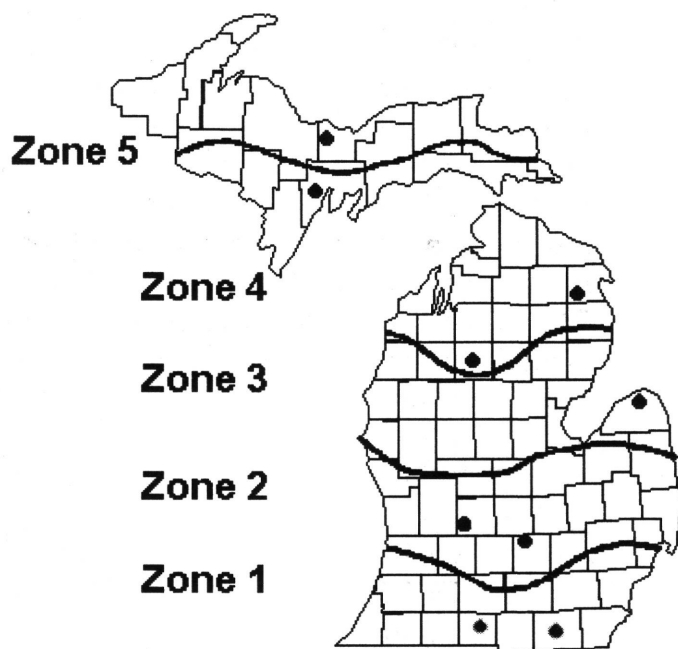
## Harvesting and Handling Silage Data

Silage plots were harvested with a newly built two-row self propelled forage harvester. Electronic scales mounted on the chopper measure plot weights. After weighing, sub-samples are collected for use in determining percent dry matter and Near Infrared Reflectance (NIR) quality analysis.

## Methods

Testing procedures (randomization, replication, planting rates, etc.) for silage evaluation are the same as those utilized for the grain trials. Plots were four rows wide and the center two rows were harvested for yield and quality. Silage tables are arranged by company order.

The fresh chopped silage (fodder plus grain) samples are weighed, oven dried until weight loss is zero, then weighed again to determine the percent dry matter. The sample is then ground small enough to pass through a 1.0 mm screen before quality analysis can be completed. At one location in each maturity zone (Branch, Ingham, and Delta counties) a sample from each rep was taken, combined, and ensiled for 20 days in a miniature PVC silo. Ensiled samples were analyzed for dry



**2000 SILAGE TRIAL LOCATIONS**

matter digestibility (DMD) and fiber digestibility (FD) using the In-vitro analysis described below.

## In-Vitro Silage Analysis

Tables 5E, 6E, 6L, 7E, and 8E provided data on dry matter digestibility and fiber digestibility as determined by in-vitro analysis on ensiled samples. Ensiled samples were taken at one location, as indicated in the table, per maturity zone. In-vitro analysis is an in-the-laboratory (literally in glass) system to estimate the actual nutrient content of a silage sample.

1. A sample of the rumen contents of a cow are removed, blended, and filtered to extract fiber.
2. Measured amounts of rumen fluid and media are added to weighed amounts of the ground silage sample.
3. This media and silage are incubated in a heated water bath at 40°C for 30 hours. In this step, the microbes from the rumen sample attack the ground silage sample in a process similar to the digestive processes of the ruminant animal. Following this digestion step, the undigested materials can be separated and measured.
4. Other evaluation procedures estimate the protein and fiber content of the silage. Samples are boiled for an hour in detergent solutions and filtered to determine fiber.

Results of the analyses are presented as:

1. **DMD=dry-matter digestibility.** This is a measure of energy available from the corn forage. The higher the DMD, the greater the energy content. It is determined by a laboratory method which incubates a sample of the corn forage with microbes from the rumen of a cow. Thirty hours is used to represent the average retention time of feed in the rumen. Differences among hybrids in DMD are approximately equal to differences in total digestible nutrients of TDN. A high DMD is desirable.

2. **FD=fiber digestibility.** This is a measure of the degree of fermentation of fiber by ruminant animals. It is determined as the disappearance of neutral detergent fiber during an in-vitro rumen fermentation. High fiber digestibility has been found to increase intake of ruminants as it decreases the filling effect of the feed and provides energy to microbes in the rumen increasing microbial protein production. A high FD is desirable.

For complete two- and three-year single site data, again our web site is at:

[www.css.msu.edu/varietytrials/](http://www.css.msu.edu/varietytrials/)

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## Near Infrared Reflectance (NIR)

### Silage Analysis (Fresh Samples)

Tables 5E, 6E, 6L, 7E, and 8E provide silage quality data as determined by NIR analysis on fresh samples. Data is provided for individual locations and averaged over multiple locations. Near infrared spectral analyses involves irradiating the ground sample with light in the near infrared range (1100 to 2500 nm). The illuminated sample absorbs light energy in the near infrared spectrum proportional to specific chemical and physical properties. The reflected energy is measured and correlated statistically with established forage quality levels. Results of the four quality traits analyzed are presented in the quality tables. The four quality traits are as follows:

1. **TDN=total digestible nutrients.** This is a measure of energy available from the corn forage. The energy content of the corn forage is one of the most important nutritive characteristics. The higher the TDN, The greater the amount of energy that is available for milk or meat production. A high TDN content is desirable.

2. **ADF=acid detergent fiber.** Acid detergent fiber represents the less digestible portion

of the corn forage, containing cellulose, lignin and heat damaged protein. ADF is closely related to the digestibility of forages. The lower the ADF, the more digestible the forage is. The most mature plant material will contain higher ADF concentrations. A low concentration of ADF is desirable.

3. **NDF=neutral detergent fiber.** This is a measure of the fiber content of the corn forage. It is less digestible than non-fiber constituents of the forage. Forages with high NDF levels have lower energy. It is also a measure of potential forage intake. High NDF levels decrease the potential forage intake. Low NDF content is desirable.

4. **CP=crude protein.** Forages are generally supplemented with high protein concentration such as soybean meal to increase the protein content of ruminant diets. Corn hybrids with high protein levels require less supplementation and therefore they lower feed costs. A high protein content is desirable.



# SELECTION OF CORN HYBRIDS FOR SILAGE

## A nutritionist's Perspective

Hybrid selection is one of the most important management decisions influencing the economics of corn silage production. Hybrids should be selected from a group that is well adapted to the area in terms of maturity, disease and insect resistance and drought tolerance. Hybrids among this group will vary in grain yield, forage yield and quality. Grain yield has been the most widely used criterion for selection of silage hybrids. However, grain yield is not related to silage quality and is not highly related to forage yield, two important criteria for silage hybrids. Although there is a slight negative relationship between forage yield and quality, the relationship is not strong and there is variation in quality even among the highest yielding hybrids. This allows opportunity to select for high quality with little reduction in yield.

While excellent silage hybrids with high forage yield and high quality exist, dual purpose hybrids that are excellent for both silage and grain do not. This is because characteristics that make an excellent grain hybrid such as fast rate of kernel dry-down and hard kernel texture are undesirable for silage production since they reduce the digestibility of starch in the grain. Kernels in corn silage should have high moisture and be of soft kernel texture to increase starch digestion by the animal. Hard, dry kernels resist digestion and will reduce

the energy content of the silage. Hybrids also vary in amount and digestibility of fiber which can affect intake and production. Varying levels of crude protein can affect supplementation costs.

## Specific Recommendations

Any hybrid selected for silage should be among the top 50 percent in forage yield. The hybrid should have a slow to medium rate of kernel dry-down, so the kernel will not be too dry when the whole plant is dry enough to ensile. This is particularly important for upright silos that require drier silage to reduce seepage. The kernel should have soft texture so that it is easily fractured during chopping and chewing. Additional recommendations vary by animal type and level of performance. Hybrids with high digestibility due to highly digestible NDF should be selected for high producing dairy cattle in early lactation. Hybrids with low NDF and high crude protein should be selected for growing animals consuming high corn silage diets to increase dry matter intake and reduce protein supplementation costs. As research becomes available, hybrid selection indexes will be able to more accurately rank hybrids for different animal types.

*M.S. Allen, Assistant Professor  
Department of Animal Science  
Michigan State University*

**TABLE C****2000 AGRONOMIC TABLE FOR SILAGE TRIAL LOCATIONS**

COUNTY		PLANTING DATES	HARVEST DATES	PREVIOUS CROP	PLANTING RATE	AVERAGE STAND	FERTILIZER
LENAWEE	<b>Zone 1</b>	May 8	Sept 15	Soybeans	28,512	25,661	163 - 48 - 48
BRANCH		April 28	Sept. 15	Corn	28,512	27,083	193 - 48 - 168
IONIA	<b>Zone 2</b>	May 4	Sept 19, 25	Wheat	28,512	24,948	189 - 38 - 38
INGHAM		May 4	Sept 13, 19	Soybeans	28,512	24,948	161 - 46 - 46
HURON	<b>Zone 3</b>	May 3	Sept 20, 29	Corn	28,512	26,374	172 - 51 - 51
ALPENA		May 24	Oct. 10	Dry beans	28,512	27,657	141 - 52 - 52
MISSAUKEE	<b>Zone 4</b>	May 10	Sept 26	Canola	28,512	(NA)	159 - 38 - 38
DELTA		May 10	Sept 27	Corn	28,512	26,801	174 - 38 - 38
ALGER	<b>Zone 5</b>	May 10	Sept 27	Cover	26,928	23,380	144 - 38 - 38

COUNTY		SOIL TYPE	SOIL TEST	FARM COOPERATOR	LOCATION
LENAWEE	<b>Zone 1</b>	Fox Sandy Loam	pH 7.2 P 307, K 460	Bakerlad Farm Blaine Baker	Clayton
BRANCH		Morley Loam	pH 7.5 P 83, K 320	Remus Riggs	Coldwater
IONIA	<b>Zone 2</b>	Miami Clay Loam	pH 6.1 P 109, K 240	Clarksville Horticultural Research Station, MSU	Clarksville
INGHAM		Capac Loam	pH 6.8 P 52, K 175	Crop & Soil Sciences Research Facility, MSU	East Lansing
HURON	<b>Zone 3</b>	Kilmanagh Loam	pH 6.5 P 125, K 350	Wil-Le Farms William, Ron & Ed McCrea	Bad Axe
ALPENA		Selkirk Loam	pH 5.5 P 307, K 580	Allen Schiellard	Hubbard Lake
MISSAUKEE	<b>Zone 4</b>	Graycalm Rubicon Sands	pH 6.6 P 43, K 260	Lake City Experiment Station MSU	Lake City
DELTA		Onaway Fine Sandy Loam	pH 7.1 P 165, K 580	Benny Herioux	Bark River
ALGER	<b>Zone 5</b>	Chatham Stoney Loam	pH 7.7 P 135, K 430	UP Experiment Station MSU	Chatham

TABLE 5E

## AVERAGE OF LENAWEE &amp; BRANCH COUNTY SILAGE TRIALS

ZONE 1

BRAND	HYBRID	2000 AVERAGE									
		Yield Data				Silage Quality - NIR				InVitro	
		%DM	Gwt/A	Dwt/A	%Std	%TDN	%ADF	%NDF	%CP	%DMD	%FD
ANDERSON CLASSIC	ELITE 5111 Super Silo	39.8	19.6	7.5	94	70.6	24.7	44.5	6.3	81.4	51.6
BIO GENE	TL 094	45.1	14.2	6.1	90	71.0	24.1	43.6	7.5	84.3	52.8
BIO GENE	TL 102	45.6	16.4	7.2	92	72.2	22.3	40.2	6.8	84.3	52.6
BROWN	BR 7044	39.8	19.9	7.7	87	72.0	22.7	41.7	6.7	85.2	57.1
GARST/AGRIPRO	8464 IT	37.5	19.8	7.3	91	72.2	22.4	41.4	6.8	84.9	54.6
GOLDEN HARVEST	H-9345	37.3	20.6	7.4	97	71.3	23.6	44.4	7.1	84.9	53.6
GREAT LAKES	5675	45.2	16.8	7.4	91	72.1	22.5	40.6	6.8	82.5	52.4
GREAT LAKES	5816	41.2	18.4	7.3	93	72.2	22.3	40.9	6.8	84.1	55.0
LG SEEDS	LG 2583	39.0	18.6	7.0	90	71.1	23.9	44.1	7.3	83.8	56.7
MIDWEST GENETIC	G 7711	39.9	20.1	7.7	93	70.6	24.7	44.2	6.6	84.2	53.3
MYCOGEN	TMF 114	36.2	24.0	* 8.5	90	70.8	24.4	44.9	6.6	82.2	53.3
NOVARTIS	N 59-Q9	42.0	19.6	* 7.9	97	72.4	22.0	40.8	6.2	86.1	55.1
NOVARTIS	N 65-A1	40.4	19.9	7.6	95	71.9	22.8	41.9	6.8	84.9	55.5
NOVARTIS	N 70-D5	36.0	22.0	* 7.9	91	70.8	24.4	45.3	6.9	84.0	55.0
PFISTER	2024	42.3	18.0	7.4	98	72.7	21.7	40.3	6.5	84.4	51.2
PFISTER	2025	46.1	18.0	* 8.1	94	72.7	21.7	39.0	6.4	83.6	52.4
PIONEER	33G47	34.6	23.3	* 8.0	88	71.7	23.1	42.6	7.4	84.5	53.9
PIONEER	33J56	33.5	25.5	* 8.5	93	71.3	23.6	43.6	7.3	82.5	50.9
PIONEER	34B23	37.2	24.0	** 8.9	91	72.4	22.1	41.9	7.3	83.5	54.7
PIONEER	34G82	38.3	19.8	7.5	95	72.7	21.7	40.3	7.1	82.0	53.4
VIGORO	V 4910	39.6	18.1	7.1	93	72.4	22.1	40.8	6.5	82.6	53.0
AVERAGE		39.8	19.8	7.6	92	71.7	23.0	42.2	6.8	83.8	53.7
HIGHEST		46.1	25.5	8.9	98	72.7	24.7	45.3	7.5	86.1	57.1
LOWEST		33.5	14.2	6.1	87	70.6	21.7	39.0	6.2	81.4	50.9
Least Significant Difference (LSD) .05%		5.4	3.4	1.1		2.9	4.2	5.8	0.7	0.8	2.2
CV		6.6	8.3	7.2		2.0	8.8	6.6	5.2	0.4	1.9

TABLE 8E

## AVERAGE OF ALGER &amp; DELTA (Early) COUNTY SILAGE TRIALS

ZONE 5

BRAND		HYBRID		2000								2 Year Avg (1999 / 2000)						
				Yield data				Silage Quality - NIR				InVitro		Yield Data			InVitro	
				%DM	Gwt/A	Dwt/A	%Std	%TDN	%ADF	%NDF	%CP	%DMD	%FD	%DM	Gwt/A	Dwt/A	%DMD	%FD
CARGILL	F 227	23.4	19.6	4.7	88	69.0	26.9	49.8	8.6	88.7	71.9	--	--	--	--	--	--	--
CARGILL	2411 FQ	23.6	19.7	4.7	89	67.6	28.9	51.3	8.8	82.4	56.4	25.2	21.7	5.5	82.4	54.2		
DAIRYLAND	STEALTH-1289	23.2	22.1	5.2	94	65.1	32.5	57.4	8.1	80.7	58.1	--	--	--	--	--		
GEERTSON	GS 998	21.0	25.8	5.4	89	65.8	31.5	55.2	9.0	82.4	62.1	--	--	--	--	--		
GREAT LAKES	3362	25.2	20.7	5.3	87	66.5	30.5	54.3	8.1	81.1	55.3	--	--	--	--	--		
LG SEEDS	LG 2367	26.1	21.9	* 5.7	95	66.2	30.9	54.0	7.5	80.9	57.7	--	--	--	--	--		
MYCOGEN	TMF 2202	23.0	19.9	4.6	86	67.0	29.8	52.9	9.3	82.5	59.7	24.8	23.3	5.8	81.9	58.7		
MYCOGEN	TMF 2323	26.0	22.7	** 6.0	85	66.1	31.0	55.2	7.9	80.8	54.5	--	--	--	--	--		
MYCOGEN	TMF 2104	22.2	24.6	5.5	85	66.8	30.1	53.5	8.6	82.3	59.5	25.6	23.6	6.4	80.0	54.3		
NOVARTIS	N 3030 Bt	23.3	25.7	** 6.0	93	67.6	28.9	51.7	7.9	79.1	54.6	--	--	--	--	--		
PIONEER	38W36	25.2	20.9	5.3	80	68.8	27.2	48.4	7.9	81.9	57.5	26.3	22.9	6.3	81.2	57.6		
PIONEER	39D81	27.1	19.6	5.4	91	69.0	26.9	47.9	8.1	82.5	55.5	--	--	--	--	--		
AVERAGE		24.1	21.9	5.3	89	67.1	29.6	52.6	8.3	82.1	58.6	25.5	22.9	6.0	81.4	56.2		
HIGHEST		27.1	25.8	6.0	95	69.0	32.5	57.4	9.3	88.7	71.9	26.3	23.6	6.4	82.4	58.7		
LOWEST		21.0	19.6	4.6	80	65.1	26.9	47.9	7.5	79.1	54.5	24.8	21.7	5.5	80.0	54.2		
Least Significant Difference (LSD) .05%		2.8	2.8	0.4		1.8	2.6	3.3	0.6	0.7	1.7							
CV		5.3	5.8	3.3		1.2	4.0	2.8	3.1	0.4	1.3							

\*\* HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE



TABLE 5E

## INDIVIDUAL COUNTY SILAGE TRIALS - LENAWEE &amp; BRANCH

ZONE 1

BHAND	HYBRID	LENAWEE								BRANCH							
		Yield Data				Silage Quality - NIR				Yield Data				Silage Quality - NIR			
		%DM	Gwt/A	Dwt/A	%Std	%TDN	%ADF	%NDF	%CP	%DM	Gwt/A	Dwt/A	%Std	%TDN	%ADF	%NDF	%CP
ANDERSON CLASSIC	ELITE 5111 Super Silo	31.9	24.1	* 7.7	93	71.5	23.3	43.1	6.8	47.7	15.0	7.2	95	69.6	26.0	45.8	5.8
BIO GENE	TL 094	38.8	17.5	6.7	87	73.5	20.5	38.7	7.9	51.3	10.8	5.5	92	68.5	27.7	48.4	7.1
BIO GENE	TL 102	38.0	20.5	* 7.8	88	74.5	19.1	36.3	7.4	53.1	12.3	6.6	95	70.1	25.4	44.0	6.1
BROWN	BR 7044	31.6	22.8	* 7.3	82	72.2	22.4	41.7	7.6	48.0	16.9	8.0	91	71.7	23.0	41.7	5.8
GARST/AGRIPRO	8464 IT	31.6	23.1	* 7.3	90	73.2	20.9	39.7	7.4	43.4	16.5	7.2	92	71.1	23.9	43.0	6.2
GOLDEN HARVEST	H-9345	30.2	24.6	* 7.4	98	71.7	23.0	43.7	7.4	44.4	16.6	7.4	95	70.9	24.2	45.1	6.7
GREAT LAKES	5675	36.9	19.3	* 7.2	85	73.7	20.2	38.1	7.3	53.5	14.3	7.6	96	70.5	24.8	43.1	6.2
GREAT LAKES	5816	32.1	21.8	7.0	87	73.0	21.2	40.6	7.4	50.3	14.9	7.5	98	71.5	23.3	41.2	6.2
LG SEEDS	LG 2583	30.5	22.5	6.9	84	71.7	23.1	43.6	8.2	47.4	14.7	7.0	95	70.6	24.7	44.5	6.3
MIDWEST GENETIC	G 7711	30.7	24.5	* 7.6	95	70.7	24.5	44.2	7.0	49.1	15.7	7.7	91	70.4	24.9	44.2	6.2
MYCOGEN	TMF 114	29.4	27.7	** 8.2	84	69.7	25.9	47.2	7.3	42.9	20.3	* 8.7	96	71.8	22.9	42.5	5.8
NOVARTIS	N 59-Q9	34.0	23.3	* 7.9	97	73.4	20.6	39.0	6.6	49.9	15.8	7.8	96	71.5	23.4	42.5	5.7
NOVARTIS	N 65-A1	30.6	23.4	7.1	95	71.3	23.6	43.5	7.5	50.1	16.3	8.1	95	72.4	22.0	40.2	6.1
NOVARTIS	N 70-D5	31.7	23.0	* 7.3	89	71.2	23.8	43.8	7.3	40.3	20.9	8.4	92	70.3	25.0	46.7	6.4
PFISTER	2024	34.2	21.2	* 7.3	98	73.6	20.4	39.0	7.1	50.3	14.8	7.4	98	71.7	23.0	41.6	5.8
PFISTER	2025	39.1	20.9	* 8.1	93	73.1	21.1	38.8	6.6	53.0	15.1	8.0	94	72.3	22.2	39.2	6.2
PIONEER	33G47	29.4	24.7	* 7.3	81	70.9	24.2	44.9	7.8	39.7	21.8	* 8.7	95	72.5	21.9	40.3	7.0
PIONEER	33J56	29.0	26.3	* 7.6	92	69.9	25.7	46.7	7.9	37.9	24.7	* 9.3	93	72.8	21.5	40.5	6.6
PIONEER	34B23	33.4	24.7	** 8.2	85	72.9	21.4	40.8	7.5	40.9	23.2	** 9.5	96	72.0	22.7	42.9	7.0
PIONEER	34G82	34.6	22.2	* 7.7	95	72.4	22.0	40.6	7.0	42.0	17.3	7.3	94	72.9	21.3	40.0	7.1
VIGORO	V 4910	34.3	20.0	6.9	88	72.0	22.7	41.9	6.5	44.9	16.1	7.2	97	72.9	21.4	39.6	6.4
AVERAGE		33.0	22.8	7.5	90	72.2	22.4	41.7	7.3	46.7	16.9	7.7	95	71.3	23.6	42.7	6.3
HIGHEST		39.1	27.7	8.2	98	74.5	25.9	47.2	8.2	53.5	24.7	9.5	98	72.9	27.7	48.4	7.1
LOWEST		29.0	17.5	6.7	81	69.7	19.1	38.1	6.5	37.9	10.8	5.5	91	68.5	21.3	39.2	5.7
Least Significant Difference (LSD) .05%		3.0	2.9	1.0		2.2	3.2	4.9	0.6	3.4	2.0	0.9		2.5	3.6	5.2	0.5
CV		6.1	8.7	9.2		2.1	9.8	8.0	5.4	5.1	8.3	8.3		2.5	10.7	8.6	6.0

TABLE 8E

## INDIVIDUAL COUNTY SILAGE TRIALS - ALGER &amp; DELTA (Early)

ZONE 5

BHAND	HYBRID	ALGER								DELTA (Early)							
		Yield Data				Silage Quality - NIR				Yield data				Silage Quality - NIR			
		%DM	Gwt/A	Dwt/A	%Std	%TDN	%ADF	%NDF	%CP	%DM	Gwt/A	Dwt/A	%Std	%TDN	%ADF	%NDF	%CP
CARGILL	F 227	21.3	16.4	3.5	81	67.0	29.8	55.1	9.0	25.5	22.8	5.8	96	71.1	23.9	44.5	8.2
CARGILL	2411 FQ	23.1	16.0	3.7	85	65.2	32.4	57.2	9.4	24.0	23.3	5.6	93	70.1	25.4	45.3	8.1
DAIRYLAND	STEALTH-1289	21.0	20.2	4.2	89	63.5	34.8	61.3	8.4	25.4	23.9	6.1	99	66.8	30.1	53.4	7.7
GEERTSON	GS 998	20.5	21.7	4.4	82	64.9	32.8	58.7	9.4	21.4	29.8	6.3	97	66.8	30.1	51.6	8.5
GREAT LAKES	3362	22.0	18.8	4.1	82	64.1	33.9	59.7	8.6	28.4	22.6	6.4	91	68.9	27.1	48.8	7.5
LG SEEDS	LG 2367	23.0	20.7	* 4.7	92	64.2	33.8	59.0	7.9	29.2	23.0	* 6.7	98	68.3	27.9	48.9	7.1
MYCOGEN	TMF 2202	20.9	17.4	3.6	77	65.3	32.2	57.1	9.5	25.0	22.3	5.6	95	68.7	27.3	48.7	9.1
MYCOGEN	TMF 2323	23.6	19.9	* 4.7	75	64.7	33.0	59.3	8.2	28.3	25.4	** 7.2	95	67.5	29.0	51.0	7.5
MYCOGEN	TMF 2404	20.6	21.6	4.4	77	65.4	32.0	57.7	9.0	23.8	27.5	* 6.5	94	68.2	28.1	49.2	8.1
NOVARTIS	N 3030 Bt	21.5	23.5	** 5.0	88	67.0	29.8	54.1	8.2	25.1	27.8	* 7.0	99	68.2	28.0	49.2	7.5
PIONEER	38W36	22.6	19.7	4.5	73	68.0	28.4	51.1	7.9	27.7	22.1	6.1	87	69.7	25.9	45.7	7.8
PIONEER	39D81	24.2	17.3	4.2	83	67.3	29.3	52.3	8.1	30.0	21.8	* 6.5	98	70.8	24.4	43.5	8.0
AVERAGE		22.0	19.4	4.3	82	65.5	31.9	56.9	8.6	26.2	24.4	6.3	95	68.8	27.3	48.3	7.9
HIGHEST		24.2	23.5	5.0	92	68.0	34.8	61.3	9.5	30.0	29.8	7.2	99	71.1	30.1	53.4	9.1
LOWEST		20.5	16.0	3.5	73	63.5	29.3	51.1	7.9	21.4	21.8	5.6	87	66.8	23.9	43.5	7.1
Least Significant Difference (LSD) .05%		1.3	1.8	0.4		2.0	2.8	4.0	0.8	1.6	2.6	0.7		1.5	2.1	3.1	0.5
CV		4.1	6.4	5.8		2.1	6.1	4.9	6.4	4.1	7.4	7.8		1.5	5.3	4.5	4.0

\*\* HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

TABLE 6E

## AVERAGE OF IONIA, INGHAM &amp; HURON (Zone 3) COUNTY SILAGE TRIALS - EARLY (&lt;103 Day)

ZONE 2

BRAND	HYBRID	2000										2 Year Avg (1999 / 2000)					3 Year Avg (1998 - 2000)				
		Yield Data			Silage Quality - NIR					InVitro		Yield Data			InVitro		Yield Data			InVitro	
		%DM	Gwt/A	Dwt/A	%StD	%TDN	%ADF	%NDF	%CP	%DMD	%FD	%DM	Gwt/A	Dwt/A	%DMD	%FD	%DM	Gwt/A	Dwt/A	%DMD	%FD
DAIRYLAND	STEALTH-1203	37.2	19.9	7.3	93	72.6	21.8	41.3	7.2	84.1	56.3	39.7	19.2	7.5	82.4	54.5	37.9	18.9	7.1	81.9	53.3
DAIRYLAND	STEALTH-1606	32.5	24.1	7.8	95	72.3	22.2	42.2	6.8	84.5	57.5	-	-	-	-	-	-	-	-	-	-
DAIRYLAND	DST 10212	35.4	18.5	6.5	86	72.6	21.8	42.5	7.9	84.1	59.6	39.1	18.5	7.2	83.0	55.9	37.3	18.5	6.9	82.9	56.2
GARSTIAGRIPRO	8707	34.8	22.2	7.7	87	71.4	23.5	44.1	7.5	81.2	52.9	38.4	20.4	7.7	80.5	52.7	36.5	20.2	7.3	79.3	51.9
GEERTSON	GS 998	36.3	20.7	7.5	94	72.4	22.0	41.2	7.1	85.1	59.0	37.8	20.2	7.6	85.2	57.6	-	-	-	-	-
GREAT LAKES	4964	36.5	19.9	7.2	96	73.2	20.9	40.3	7.3	84.5	56.5	-	-	-	-	-	-	-	-	-	-
LG SEEDS	LG 2499	32.5	22.0	7.1	96	72.0	22.6	42.9	8.0	83.5	56.0	34.5	20.9	7.2	82.3	54.4	33.5	20.1	6.7	82.1	54.8
MYCOGEN	TMF 100	34.9	21.7	7.5	89	71.5	23.4	43.7	7.3	81.9	56.6	37.2	21.6	8.0	81.1	55.3	35.5	21.5	7.6	80.7	54.7
MYCOGEN	T 29400	34.9	21.7	7.5	89	71.1	23.9	44.9	7.2	83.8	59.7	-	-	-	-	-	-	-	-	-	-
NOVARTIS	N 48-V8	34.5	24.6	** 8.5	94	70.3	25.0	47.2	6.9	80.1	55.3	-	-	-	-	-	-	-	-	-	-
PIONEER	36R10	35.7	21.7	7.7	95	72.2	22.4	42.3	7.1	82.3	54.0	-	-	-	-	-	-	-	-	-	-
PIONEER	36G12	39.1	20.4	* 7.9	95	73.9	19.9	38.8	6.6	86.5	56.5	39.8	20.3	8.0	85.3	57.3	-	-	-	-	-
PIONEER	37M34	37.4	20.9	7.8	95	72.7	21.7	41.8	7.1	81.8	53.8	-	-	-	-	-	-	-	-	-	-
PIONEER	37R71	36.8	20.4	7.5	96	72.2	22.3	42.7	7.3	83.1	52.5	38.9	18.6	7.2	83.7	53.2	37.7	18.0	6.8	82.4	52.5
RENK	RK 606	36.6	20.4	7.4	96	72.7	21.6	41.3	7.4	83.0	52.9	-	-	-	-	-	-	-	-	-	-
RENK	RK 685	40.1	17.3	6.8	94	71.5	23.3	43.9	7.3	83.5	53.8	-	-	-	-	-	-	-	-	-	-
TRELAY	6900	33.3	19.8	6.6	87	72.2	22.3	42.9	7.3	83.2	56.4	-	-	-	-	-	-	-	-	-	-
VIGORO	V 4400	40.3	17.7	7.1	97	72.3	22.2	41.7	7.0	82.5	55.4	-	-	-	-	-	-	-	-	-	-
AVERAGE		36.0	20.8	7.4	93	72.2	22.4	42.5	7.2	83.3	55.7	38.2	20.0	7.6	82.9	55.1	36.4	19.5	7.1	81.6	53.9
HIGHEST		40.3	24.6	8.5	97	73.9	25.0	47.2	8.0	86.5	59.7	39.8	21.6	8.0	85.3	57.6	37.9	21.5	7.6	82.9	56.2
LOWEST		32.5	17.3	6.5	86	70.3	19.9	38.8	6.6	80.1	52.5	34.5	18.5	7.2	80.5	52.7	33.5	18.0	6.7	79.3	51.9
Least Significant Difference (LSD) .05%		2.6	1.8	0.6		0.9	1.4	2.1	0.5	1.0	2.6										
CV		4.3	5.2	5.1		0.8	3.7	2.9	3.8	0.6	2.2										

\*\* HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

TABLE 6E

## INDIVIDUAL COUNTY SILAGE TRIALS - IONIA, INGHAM &amp; HURON - EARLY (&lt;103 Day)

ZONE 2

BRAND	HYBRID	IONIA						INGHAM						HURON (Zone 3)												
		Yield Data			Silage Quality - NIR			Yield Data			Silage Quality - NIR			Yield Data			Silage Quality - NIR									
		%DM	Gw/A	Dw/A	%Std	%TDN	%ADF	%NDF	%CP	%DM	Gw/A	Dw/A	%Std	%TDN	%ADF	%NDF	%CP	%DM	Gw/A	Dw/A	%Std	%TDN	%ADF	%NDF	%CP	
DAIRYLAND	STEALTH-1203	40.4	17.9	*7.2	96	74.3	19.3	36.7	6.6	33.3	21.7	7.2	90	71.5	23.3	43.0	7.4	37.9	20.1	7.6	92	72.0	22.7	44.3	7.5	
	STEALTH-1606	34.8	21.7	*7.6	98	73.1	21.1	39.8	6.1	30.3	25.2	7.6	94	71.9	22.8	42.1	6.9	32.5	25.3	*8.2	93	71.9	22.8	44.6	7.5	
	DST 10212	37.8	15.1	5.7	87	72.8	21.5	41.6	7.2	33.8	21.2	7.2	84	72.8	21.5	41.3	7.9	34.7	19.2	6.7	86	72.2	22.3	44.6	8.5	
	GARST/AGRI PRO	8707	38.3	21.0	*8.0	86	72.7	21.7	40.7	6.7	32.1	24.2	*7.8	85	70.1	25.4	46.2	7.5	34.1	21.4	7.3	90	71.5	23.4	45.4	8.3
GEERTSON	GS 998	39.3	18.4	*7.2	93	73.8	20.1	38.1	6.9	33.8	22.5	7.6	91	72.0	22.7	41.3	7.0	35.9	21.3	7.6	96	71.6	23.2	44.3	7.4	
GREAT LAKES	4964	39.1	17.5	6.8	93	73.9	19.9	38.5	6.9	33.0	21.5	7.1	96	72.1	22.5	42.1	7.5	37.3	20.6	7.7	99	73.7	20.2	40.4	7.5	
	LG SEEDS	34.2	19.6	6.7	93	73.6	20.3	38.5	7.6	30.9	24.4	7.5	96	71.9	22.8	42.9	8.3	32.5	21.9	7.1	99	70.6	24.6	47.2	8.0	
	MYCOGEN	TMF 100	35.8	20.4	*7.3	90	72.2	22.4	41.8	7.6	31.7	23.0	7.3	83	71.5	23.4	43.0	7.3	37.2	21.6	*8.0	95	70.8	24.3	46.2	7.1
	MYCOGEN	T 29400	35.8	20.4	*7.3	90	72.3	22.2	41.7	6.6	31.7	23.0	7.3	83	71.2	23.8	44.4	7.4	37.2	21.6	*8.0	95	69.8	25.8	48.6	7.7
NOVARTIS	N 48-V8	37.3	22.7	**8.5	94	71.5	23.3	44.0	6.4	33.3	25.1	**8.3	88	69.6	26.1	48.2	7.0	32.8	26.1	**8.6	98	69.9	25.6	49.3	7.4	
PIONEER	36R10	38.1	20.5	*7.8	98	73.1	21.1	39.8	6.8	33.8	22.0	7.5	94	71.9	22.8	42.6	7.0	35.1	22.6	*7.9	95	71.6	23.2	44.6	7.5	
PIONEER	36G12	43.6	17.5	*7.7	94	74.8	18.7	36.3	6.3	36.4	21.7	*7.9	94	73.2	20.9	39.8	6.4	37.4	22.0	*8.2	98	73.7	20.2	40.4	7.2	
PIONEER	37M34	41.7	18.9	*7.9	92	74.4	19.2	37.4	6.6	34.5	21.4	7.4	96	71.9	22.8	43.0	7.2	36.1	22.3	*8.1	98	71.7	23.0	45.0	7.4	
PIONEER	37R71	37.6	19.4	*7.3	96	72.7	21.7	40.8	7.1	34.7	21.1	7.3	97	71.3	23.6	44.1	7.6	38.2	20.6	*7.9	97	72.7	21.7	43.1	7.2	
RENK	RK 606	39.4	18.5	*7.3	95	73.6	20.4	39.1	7.0	33.2	21.7	7.2	95	72.2	22.4	42.0	7.6	37.1	21.1	7.8	98	72.4	22.0	42.9	7.6	
RENK	RK 685	46.8	13.2	6.2	94	72.7	21.7	40.8	7.0	35.5	21.2	7.5	94	71.1	23.9	44.4	7.3	37.9	17.6	6.7	94	70.8	24.3	46.6	7.6	
TRELAY	6900	35.2	16.0	5.6	88	73.2	20.9	40.4	7.0	31.4	22.4	7.0	84	72.3	22.2	42.0	7.2	33.4	21.1	7.1	89	71.1	23.9	46.4	7.6	
VIGORO	V 4400	45.8	14.9	6.8	96	72.9	21.3	39.8	6.5	35.2	19.8	7.0	97	72.1	22.5	41.8	7.3	40.0	18.5	7.4	99	72.0	22.7	43.6	7.3	
AVERAGE		38.9	18.5	7.2	93	73.2	20.9	39.8	6.8	33.3	22.4	7.4	91	71.7	23.1	43.0	7.3	36.0	21.4	7.7	95	71.7	23.1	44.9	7.6	
HIGHEST		46.8	22.7	8.5	98	74.8	23.3	44.0	7.6	36.4	25.2	8.3	97	73.2	26.1	48.2	8.3	40.0	26.1	8.6	99	73.7	25.8	49.3	8.5	
LOWEST		34.2	13.2	5.6	86	71.5	18.7	36.3	6.1	30.3	19.8	7.0	83	69.6	20.9	39.8	6.4	32.5	17.6	6.7	86	69.8	20.2	40.4	7.1	
Least Significant Difference (LSD) .05%		3.9	2.8	1.3		1.8	2.6	4.1	0.6	1.9	1.8	0.6		1.5	2.2	3.2	0.5	2.3	1.9	0.7		2.2	3.1	4.8	0.6	
CV		7.0	10.8	12.7		1.7	8.6	7.3	6.2	4.1	5.8	5.9		1.5	6.6	5.2	4.8	4.5	6.3	6.6		2.1	9.4	7.5	5.8	

\*\* HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE



TABLE 6L

AVERAGE OF IONIA, INGHAM &amp; HURON (Zone 3) COUNTY SILAGE TRIALS - LATE (&gt;104 Day)

ZONE 2

BRAND	HYBRID	2000										2 Year Avg (1999 / 2000)						3 Year Avg (1998 - 2000)								
		Yield Data			Silage Quality - NIR			In/Vitro		Yield Data			In/Vitro			Yield Data			In/Vitro							
		%DM	Gw/A	Dw/A	%Std	%TDN	%ADF	%NDF	%CP	%DMD	%FD	%DM	Gw/A	Dw/A	%DMD	%CP	%DM	Gw/A	Dw/A	%DMD	%CP					
ANDERSON CLASSIC	ELITE 5111 Super Silo	35.5	21.4	7.6	89	71.2	23.8	44.8	6.9	81.0	52.6	37.6	21.8	8.2	83.0	57.3	40.2	19.1	7.7	83.0	57.3	40.2	19.1	7.7	83.0	57.3
CORN BELT	C 567	39.9	18.5	7.4	92	72.4	22.0	41.6	7.0	83.3	55.7	42.6	18.8	8.0	83.4	53.9	40.8	19.1	7.7	83.0	53.9	40.8	19.1	7.7	83.0	53.9
DAIRYLAND	STEALTH-1406	40.4	20.1	* 8.0	88	72.7	21.7	41.3	6.7	82.9	55.7	42.9	19.2	8.2	80.1	51.5	40.8	19.2	7.8	80.9	52.1	40.8	19.2	7.8	80.9	52.1
DAIRYLAND	STEALTH-1507	35.2	22.4	7.9	96	71.5	23.3	43.9	6.8	83.1	53.9	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
DAIRYLAND	STEALTH-1508	36.8	21.4	7.8	90	72.5	21.9	41.5	7.0	83.4	53.4	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
GARST	24X	34.8	20.5	7.2	94	70.6	24.6	45.9	7.3	81.3	53.9	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
GEERTSON	GS 1049	38.3	19.8	7.5	91	73.2	20.9	40.2	6.7	83.6	54.5	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
GOLDEN HARVEST	H-2515	39.7	18.3	7.2	90	72.0	22.7	43.1	6.9	83.4	57.3	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
GOLDEN HARVEST	H-8230	42.1	16.9	7.0	89	72.0	22.6	42.6	6.9	81.9	51.9	42.9	17.8	7.6	83.2	58.1	40.5	20.1	8.0	84.6	56.1	40.5	20.1	8.0	84.6	56.1
GREAT LAKES	5675	41.3	18.5	7.5	90	72.9	21.4	40.8	6.8	84.3	56.0	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
GREAT LAKES	5816	38.7	20.0	7.7	92	72.5	21.9	41.9	7.1	81.9	62.1	39.4	20.6	8.1	82.7	60.4	37.4	20.8	7.8	82.6	59.7	37.4	20.8	7.8	82.6	59.7
HIGH CYCLE	6601nE	35.1	20.6	7.1	87	72.7	21.7	42.0	7.5	84.2	56.7	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
LG SEEDS	LG 2526 SP	32.9	23.1	7.6	94	71.5	23.3	43.2	6.9	83.2	55.5	36.3	21.5	7.7	83.7	57.6	40.5	20.1	8.0	84.6	56.1	40.5	20.1	8.0	84.6	56.1
MIDWEST GENETIC	G 7366	36.6	20.4	7.4	94	72.4	22.0	42.0	6.6	83.0	53.7	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
MYCOGEN	TMF 114	31.9	26.9	** 8.7	91	69.4	26.4	48.3	6.8	79.4	53.9	35.5	26.0	9.2	79.8	54.6	33.8	25.4	8.6	80.3	54.1	33.8	25.4	8.6	80.3	54.1
NOVARTIS	N 59-Q9	36.6	21.3	7.8	94	72.8	21.5	41.6	6.5	80.7	52.0	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
PIONEER	33J56	32.5	26.1	* 8.4	94	71.4	23.5	44.1	6.9	78.9	50.1	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
PIONEER	33T90	33.8	23.8	* 8.0	94	71.7	23.0	43.0	6.8	82.7	54.1	36.8	23.7	8.7	83.3	56.3	40.5	20.1	8.0	84.6	56.1	40.5	20.1	8.0	84.6	56.1
PIONEER	34G82	35.8	21.9	* 8.0	97	72.2	22.4	42.1	7.0	83.0	54.8	37.7	21.2	8.1	81.6	50.2	40.5	20.1	8.0	84.6	56.1	40.5	20.1	8.0	84.6	56.1
TRELAY	7004	36.4	21.4	7.8	93	72.4	22.0	41.8	7.1	82.1	53.7	38.1	20.8	7.9	80.1	53.2	40.5	20.1	8.0	84.6	56.1	40.5	20.1	8.0	84.6	56.1
TRELAY	9055	37.1	19.4	7.2	89	71.8	22.9	43.2	6.6	84.2	54.7	40.5	20.1	8.0	84.6	56.1	38.5	20.3	7.7	84.2	54.2	38.5	20.3	7.7	84.2	54.2
AVERAGE		36.7	21.1	7.7	92	72.0	22.6	42.8	6.9	82.5	54.6	39.1	21.0	8.2	82.3	55.4	38.1	21.0	7.9	82.2	54.9	38.1	21.0	7.9	82.2	54.9
HIGHEST		42.1	26.9	8.7	97	73.2	26.4	48.3	7.5	84.3	62.1	42.9	26.0	9.2	84.6	60.4	40.8	25.4	8.6	84.2	59.7	40.8	25.4	8.6	84.2	59.7
LOWEST		31.9	16.9	7.0	87	69.4	20.9	40.2	6.5	78.9	50.1	35.5	17.8	7.6	79.8	50.2	33.8	19.1	7.7	80.3	52.1	33.8	19.1	7.7	80.3	52.1
Least Significant Difference (LSD) .05%		3.2	2.0	0.7		1.2	1.7	2.6	0.4	1.0	2.1															
CV		5.2	5.7	5.2		1	4.5	3.7	3.3	0.6	1.9															

\*\* HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

TABLE 6L

AVERAGE OF IONIA, INGHAM &amp; HURON COUNTY SILAGE TRIALS - LATE (&gt;104 Day)

ZONE 2

BRAND	HYBRID	IONIA					INGHAM					HURON (Zone 3)					
		Yield Data		Silage Quality - NIR			Yield Data		Silage Quality - NIR			Yield Data		Silage Quality - NIR			
		%DM	Gw/A	Dw/A	%Std	%TDN	%ADF	%NDF	%CP	%DM	Gw/A	Dw/A	%Std	%TDN	%ADF	%NDF	%CP
ANDERSON CLASSIC ELITE 5111 Super Silo		36.0	19.9	* 7.2	87	72.6	21.8	41.3	6.7	36.6	23.0	8.3	85	70.8	24.3	44.9	6.7
	CORN BELT	43.3	13.3	5.8	89	74.5	19.1	36.8	6.7	39.9	21.6	8.7	90	72.2	22.4	41.7	7.0
	DAIRYLAND	44.9	17.3	* 7.7	93	75.8	17.2	33.9	6.7	37.4	22.9	8.5	77	70.9	24.2	44.7	6.6
	DAIRYLAND	36.3	18.9	6.9	98	72.6	21.8	41.4	6.7	34.0	26.1	* 8.9	93	71.0	24.0	44.2	6.5
	DAIRYLAND	37.4	18.1	6.7	90	74.5	19.1	36.9	6.9	37.2	23.5	8.7	87	72.4	22.0	41.2	6.9
GARST	24X	33.9	18.1	6.2	93	72.7	21.7	41.0	7.1	35.5	22.9	8.1	92	71.0	24.0	44.6	7.3
	GEERTSON	41.3	15.1	6.2	93	74.7	18.8	36.5	6.6	36.1	23.3	8.3	87	72.9	21.4	40.6	6.9
	GOLDEN HARVEST	43.3	15.3	6.7	94	73.5	20.5	39.6	6.6	37.4	20.7	7.7	85	70.9	24.2	45.0	6.8
	GOLDEN HARVEST	47.0	12.5	5.9	89	73.3	20.8	39.6	6.6	37.3	19.9	7.6	84	71.3	23.7	43.4	6.7
	GREAT LAKES	45.0	14.3	6.4	91	74.6	18.9	36.5	6.6	40.1	21.1	8.4	86	71.5	23.4	43.5	6.7
GREAT LAKES	5816	43.4	16.6	* 7.2	91	75.2	18.1	35.9	6.8	37.1	22.0	8.3	90	72.0	22.7	42.5	6.6
	HIGH CYCLE	35.7	17.6	6.3	92	74.1	19.6	38.1	7.2	36.5	22.3	7.9	81	73.0	21.2	40.9	7.4
	LG SEEDS	33.4	21.1	* 7.0	97	73.0	21.2	39.8	6.5	32.5	24.4	8.0	93	71.0	24.1	43.9	6.6
	MIDWEST GENETIC	38.8	17.5	6.8	99	73.7	20.2	38.4	6.2	33.6	23.3	7.8	86	71.3	23.6	44.1	6.7
	MYCOGEN	31.8	25.5	** 8.1	90	71.3	23.6	44.0	6.8	31.9	29.3	** 9.6	88	69.4	26.3	47.7	6.7
NOVARTIS	N 59-Q9	38.3	19.3	* 7.4	97	74.3	19.4	37.8	6.3	36.2	22.8	8.1	91	72.2	22.3	42.4	6.0
	PIONEER	32.8	23.9	* 7.8	93	73.7	20.2	38.9	7.2	32.9	28.1	* 9.2	90	71.0	24.1	44.3	6.4
	PIONEER	33.1	21.2	* 7.0	90	73.1	21.1	40.0	6.9	35.3	26.5	* 9.3	98	71.5	23.4	42.7	6.4
	PIONEER	35.8	21.2	* 7.7	96	73.9	19.9	38.3	6.8	36.8	22.0	8.2	97	72.4	22.1	41.2	6.7
	TRELAY	7004	37.1	19.1	* 7.1	94	74.9	18.5	36.3	7.2	36.6	22.3	8.2	89	71.7	23.0	42.9
TRELAY	9095	38.0	14.7	5.6	83	72.9	21.4	40.6	6.5	36.0	22.4	8.1	89	72.1	22.5	41.8	6.4
AVERAGE		38.4	18.1	6.8	92	73.7	20.1	38.6	6.7	35.9	23.4	8.4	88	71.5	23.3	43.2	6.7
HIGHEST		47.0	25.5	8.1	99	75.8	23.3	44.0	7.2	40.1	29.3	9.6	98	73.0	26.3	47.7	7.4
LOWEST		31.8	12.5	5.6	83	71.3	18.1	33.9	6.2	31.9	19.9	7.6	77	69.4	21.2	40.6	6.0
Least Significant Difference (LSD) .05%		4.0	2.8	1.1		2.2	3.2	4.9	0.5	3.1	2.7	0.8		1.9	2.7	4.0	0.6
CV		7.3	11.1	11.8		2.2	11.3	8.9	5.6	6.2	8.2	7.1		1.9	8.2	6.5	6.2

\*\* HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

TABLE 7E

## AVERAGE OF ALPENA, MISSAUKEE &amp; DELTA (Late) COUNTY SILAGE TRIALS

ZONE 4

BRAND	HYBRID	2000										2 Year Avg (1999 / 2000)						3 Year Avg (1998 - 2000)					
		Yield Data			Silage Quality - NIR				InVtro			Yield Data			InVtro			Yield Data			InVtro		
		%DM	Gw/A	Dw/A	%Std	%TDN	%ADF	%NDF	%CP	%DMD	%FD	%DM	Gw/A	Dw/A	%DMD	%FD	%DM	Gw/A	Dw/A	%DMD	%FD		
DAIRYLAND	STEALTH-1289	34.7	17.1	5.5	96	71.1	23.9	44.7	8.3	80.7	58.1	38.1	18.2	6.4	79.7	53.9	36.4	18.6	6.4	-	-		
DAIRYLAND	STEALTH-1496	32.3	20.0	* 6.0	99	70.3	25.0	47.2	8.4	79.2	54.9	36.4	19.8	6.7	79.5	54.1	35.5	20.3	6.7	79.8	54.2		
DAIRYLAND	STEALTH-1499	32.5	19.6	* 5.9	98	71.7	23.1	44.3	8.3	81.8	56.3	36.0	19.3	6.5	80.5	53.0	-	-	-	-	-		
GEERTSON	GS 998	29.1	21.5	5.7	96	70.8	24.3	44.8	8.5	82.4	62.1	33.0	20.8	6.3	82.3	59.0	32.1	21.2	6.4	-	-		
GEERTSON	GS 1049	28.5	20.7	5.6	94	70.8	24.3	46.2	8.4	80.6	55.1	-	-	-	-	-	-	-	-	-	-		
GREAT LAKES	3362	34.8	16.9	5.5	90	71.2	23.8	45.7	8.1	81.1	55.3	-	-	-	-	-	-	-	-	-	-		
GREAT LAKES	4492	32.3	19.5	* 5.9	97	70.1	25.3	47.2	8.2	76.9	51.8	-	-	-	-	-	-	-	-	-	-		
GREAT LAKES	4526	32.7	19.5	* 6.0	90	71.7	23.0	44.5	8.5	81.1	57.4	-	-	-	-	-	-	-	-	-	-		
LG SEEDS	LG 2367	36.8	15.5	5.4	98	71.0	24.1	45.5	7.6	80.9	56.3	40.3	17.3	6.6	80.7	55.0	37.8	19.0	6.8	81.9	56.5		
MYCOGEN	TMF 2323	37.2	18.6	* 6.4	94	71.6	23.2	44.5	8.1	80.8	54.5	-	-	-	-	-	-	-	-	-	-		
MYCOGEN	T 29400	31.3	22.1	** 6.6	91	70.8	24.4	45.9	8.0	80.2	55.7	-	-	-	-	-	-	-	-	-	-		
NOVARTIS	N 3030 Bt	33.2	18.4	5.7	97	72.1	22.5	42.6	7.7	79.1	54.6	-	-	-	-	-	-	-	-	-	-		
PIONEER	37 J99	33.1	19.1	* 5.9	96	72.8	21.5	41.6	8.4	81.3	54.7	37.5	19.7	6.9	80.9	52.7	-	-	-	-	-		
PIONEER	38P05	35.6	17.8	5.8	97	71.7	23.1	43.6	7.8	80.8	55.2	39.4	18.1	6.6	80.9	53.2	-	-	-	-	-		
PIONEER	38T27	34.5	18.7	* 6.0	96	71.5	23.3	44.0	7.8	81.4	58.3	-	-	-	-	-	-	-	-	-	-		
RENK	RK 546	31.9	21.9	* 6.4	96	70.7	24.5	45.8	7.7	80.4	57.4	34.8	21.8	7.0	78.9	52.1	-	-	-	-	-		
AVERAGE		33.2	19.2	5.9	95	71.2	23.7	44.9	8.1	80.5	56.1	36.9	19.4	6.6	80.4	54.1	35.5	19.8	6.6	80.9	55.4		
HIGHEST		37.2	22.1	6.6	99	72.8	25.3	47.2	8.5	82.4	62.1	40.3	21.8	7.0	82.3	59.0	37.8	21.2	6.8	81.9	56.5		
LOWEST		28.5	15.5	5.4	90	70.1	21.5	41.6	7.6	76.9	51.8	33.0	17.3	6.3	78.9	52.1	32.1	18.6	6.4	79.8	54.2		
Least Significant Difference (LSD) .05%		2.8	2.3	0.7		1.4	1.9	3.0	0.6	0.6	1.8												
CV		5.1	7.3	7.2		1.1	4.9	4.0	4.4	0.3	1.5												

\*\* HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

TABLE 7E

## INDIVIDUAL COUNTY SILAGE TRIALS - ALPENA, MISSAUKEE &amp; DELTA (Late)

ZONE 4

BRAND	HYBRID	ALPENA						MISSAUKEE						DELTA (Late)											
		Yield Data			Silage Quality - NIR			Yield Data			Silage Quality - NIR			Yield Data			Silage Quality - NIR								
		%DM	Gwt/A	Dwt/A	%Std	%TDN	%ADF	%NDF	%CP	%DM	Gwt/A	Dwt/A	%Std	%TDN	%ADF	%NDF	%CP	%DM	Gwt/A	Dwt/A	%Std	%TDN	%ADF	%NDF	%CP
DAIRYLAND	STEALTH-1289	45.4	9.8	4.4	97	73.7	20.2	39.7	7.8	32.4	17.1	5.5	--	72.5	21.9	42.6	9.0	26.4	24.4	6.5	95	67.1	29.6	51.8	8.1
	STEALTH-1496	39.8	11.3	4.5	99	72.6	21.8	43.6	7.8	33.4	20.4	* 6.8	--	72.0	22.6	44.3	9.3	23.8	28.2	* 6.7	100	66.4	30.6	53.8	8.0
	STEALTH-1499	42.1	13.1	** 5.5	96	74.0	19.8	39.6	7.1	31.5	18.3	5.8	--	73.4	20.7	41.9	9.3	23.8	27.3	6.5	99	67.7	28.8	51.5	8.5
	GS 998	37.3	12.4	4.6	98	73.6	20.3	39.6	7.2	29.2	20.3	5.9	--	72.2	22.3	42.8	9.5	20.9	31.7	* 6.6	95	66.6	30.3	52.1	8.9
GEERTSON	GS 1049	35.2	13.3	4.7	98	72.0	22.7	44.5	7.4	28.5	21.3	6.1	--	72.8	21.5	42.5	9.5	21.8	27.4	6.0	91	67.7	28.8	51.5	8.2
GREAT LAKES	3662	45.1	10.3	4.7	87	73.8	20.0	40.1	7.4	31.3	16.7	5.2	--	73.1	21.0	42.4	9.4	27.9	23.8	* 6.7	93	66.6	30.4	54.5	7.6
GREAT LAKES	4492	41.5	11.8	4.9	98	71.9	22.8	43.7	7.3	30.7	17.4	5.4	--	71.5	23.4	45.3	9.4	24.8	29.2	* 7.3	97	67.0	29.8	52.6	8.0
GREAT LAKES	4526	40.8	12.2	* 5.0	94	73.4	20.7	41.1	7.9	30.9	19.5	6.0	--	73.8	20.1	41.5	9.9	26.4	26.8	* 7.1	86	68.2	28.1	50.9	7.8
LG SEEDS	LG 2367	43.7	10.1	4.4	99	72.4	22.1	43.4	7.2	37.2	14.0	5.2	--	72.9	21.3	42.1	8.1	29.6	22.5	* 6.7	97	67.6	28.9	50.9	7.4
MYCOGEN	TMF 2323	48.2	10.4	* 5.1	96	74.6	18.9	37.9	7.2	34.9	20.4	* 7.0	--	72.0	22.7	45.4	9.7	28.5	24.9	* 7.1	92	68.2	28.0	50.1	7.3
MYCOGEN	T 29400	37.9	12.8	4.9	93	73.1	21.1	42.1	7.2	31.4	23.8	** 7.5	--	72.2	22.4	43.1	9.0	24.7	29.6	** 7.3	89	67.1	29.7	52.5	7.9
NOVARTIS	N 3030 BI	43.2	10.9	4.7	100	75.7	17.3	35.2	7.0	31.3	17.9	5.6	--	73.0	21.2	41.4	8.4	25.2	26.5	* 6.7	95	67.5	29.0	51.3	7.7
PIONEER	37399	41.7	12.0	* 5.0	100	75.7	17.3	35.7	7.8	33.0	19.1	6.3	--	74.5	19.1	39.4	9.6	24.7	26.3	6.5	91	68.1	28.2	49.8	7.8
PIONEER	38P05	48.3	10.4	* 5.0	100	75.6	17.5	35.8	7.3	33.1	17.9	5.9	--	72.1	22.5	43.4	8.6	25.4	25.0	6.4	95	67.3	29.3	51.7	7.5
PIONEER	38T27	44.1	11.8	* 5.2	96	74.2	19.5	38.8	7.3	34.0	17.6	6.0	--	72.9	21.4	42.0	8.6	25.3	26.7	* 6.7	96	67.6	28.9	51.1	7.5
RENK	RK 546	42.4	12.1	* 5.1	94	74.5	19.0	38.0	6.9	29.8	24.1	* 7.2	--	72.0	22.7	44.4	8.4	23.5	29.5	* 6.9	98	65.5	31.9	54.9	7.8
AVERAGE		42.3	11.5	4.9	97	73.8	20.1	39.9	7.4	32.0	19.1	6.1	--	72.7	21.7	42.8	9.1	25.2	26.9	6.7	94	67.3	29.4	51.9	7.9
HIGHEST		48.3	13.3	5.5	100	75.7	22.8	44.5	7.9	37.2	24.1	7.5	--	74.5	23.4	45.4	9.9	29.6	31.7	7.3	100	68.2	31.9	54.9	8.9
LOWEST		35.2	9.8	4.4	87	71.9	17.3	35.2	6.9	28.5	14.0	5.2	--	71.5	19.1	39.4	8.1	20.9	22.5	6.0	86	65.5	28.0	49.8	7.3
Least Significant Difference (LSD) .05%		2.3	1.2	0.5		2.0	2.8	4.7	0.5	2.7	3.3	1.0		2.1	3.0	4.2	1.1	1.4	2.4	0.7		1.7	2.5	3.8	0.6
CV		3.8	7.0	7.5		1.9	9.9	8.3	4.7	5.8	12.2	11.9		2.1	9.9	6.9	8.8	4.0	6.2	6.8		1.8	5.9	5.1	5.3

\*\* HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE

\* NOT SIGNIFICANTLY DIFFERENT FROM HIGHEST YIELDING HYBRID IN DRY WEIGHT PER ACRE



# SILAGE INDEX FOR 2000 CORN HYBRIDS COMPARED

There were 72 hybrids from 19 seed companies tested as 231 individual entries in the 2000 Michigan Corn Performance Silage Trials. The map shows the zones where the hybrids were entered. Early and late hybrid tables are designated by an E or L nest to the table number. Company names used in association with hybrid numbers refer to the brand and the numbers are the variety (hybrid) designation.

## Table 5E

Lenawee Silage  
Branch Silage  
Average Silage

## Table 6E / 6L

Ionia Silage  
Ingham Silage  
Huron Silage  
Average Silage

## Table 7E

Alpena Silage  
Missaukee Silage  
Delta L Silage  
Average Silage

## Table 8E

Alger Silage  
Delta E Silage  
Average Silage

## The Andersons, Inc.

ANDERSON CLASSIC ELITE  
5111 Super Silo (5E,6L)

## Bio Gene

BIO GENE BG 0945 (5E)  
BIO GENE BG 1025 (5E)

## Brown Seed Farms

BROWN BR 7044 (5E)

## Cargill Hybrid Seeds

CARGILL F227 (8E)  
CARGILL 2411 FQ (8E)

## Corn Belt Hybrids

CORN BELT C 567 (6L)

## Dairyland Seed Company, Inc.

DAIRYLAND STEALTH-1203 (6E)  
DAIRYLAND STEALTH-1289 (7E,8E)  
DAIRYLAND STEALTH-1406 (6L)  
DAIRYLAND STEALTH-1496 (7E)  
DAIRYLAND STEALTH-1499 (7E)  
DAIRYLAND STEALTH-1507 (6L)  
DAIRYLAND STEALTH-1508 (6L)  
DAIRYLAND STEALTH-1606 (6E)  
DAIRYLAND DST-10212 (6E)

## Garst Seed Co.

GARST 24X (6L)  
GARST/AGRIPRO 8464IT (5E)  
GARST/AGRIPRO 8707 (6E)

## Geertson Seed Farms

GEERTSON GS998 (6E,7E,8E)  
GEERTSON GS1049 (6L,7E)

## GoldenHarvest/Sommer Bros. Seed Co.

GOLDEN HARVEST H-2515 (6L)  
GOLDEN HARVEST H-9345 (5E)  
GOLDEN HARVEST H-8290 (6L)

## Great Lakes Hybrids, Inc.

GREAT LAKES 3362 (7E,8E)  
GREAT LAKES 4492 (7E)  
GREAT LAKES 4526 (7E)  
GREAT LAKES 4964 (6E)  
GREAT LAKES 5675 (5E,6L)  
GREAT LAKES 5816 (5E,6L)

## Trelay Seed Company

HIGH CYCLE HC6601nE (6L)

## LG Seeds

LG SEEDS LG2367 (7E,8E)  
LG SEEDS LG2499 (6E)  
LG SEEDS LG2526SP (6L)  
LG SEEDS LG2583 (5E)

## Midwest Seed Genetics

MIDWEST G7366 (6L)  
MIDWEST G7711 (5E)

## Mycogen Plant Sciences

MYCOGEN TMF100 (6E)  
MYCOGEN TMF114 (5E,6L)  
MYCOGEN TMF2202 (8E)  
MYCOGEN TMF2323 (7E,8E)  
MYCOGEN TMF2404 (8E)  
MYCOGEN T29400 (6E,7E)

## Novartis Seeds, Inc.

NOVARTIS N3030Bt (7E,8E)  
NOVARTIS N48-V8 (6E)

## Novartis Seeds, Inc. (contuned)

NOVARTIS N59-Q9 (5E,6L)  
NOVARTIS N65-A1 (5E)  
NOVARTIS N70-D5 (5E)

## Pfister Hybrid Corn Co.

PFISTER 2024 (5E)  
PFISTER 2025 (5E)

## Pioneer Hi-Bred International, Inc.

PIONEER 33G47 (5E)  
PIONEER 33J56 (5E,6L)  
PIONEER 33T90 (6L)  
PIONEER 34B23 (5E)  
PIONEER 34G82 (5E,6L)  
PIONEER 36R10 (6E)  
PIONEER 36G12 (6E)  
PIONEER 37M34 (6E)  
PIONEER 37R71 (6E)  
PIONEER 37J99 (7E)  
PIONEER 38P05 (7E)  
PIONEER 38T27 (7E)  
PIONEER 38W36 (8E)  
PIONEER 39D81 (8E)

## Renk Seed Company, Inc.

RENK RK546 (7E)  
RENK RK606 (6E)  
RENK RK685 (6E)

## Trelay Seed Company, Inc.

TRELAY 6900 (6E)  
TRELAY 7004 (6L)  
TRELAY 9095 (6L)

## Royster-Clark, Inc.

VIGORO V4400 (6E)  
VIGORO V4910 (5E)

# COMPANIES ENTERED IN THE 2000 MICHIGAN CORN PERFORMANCE TRIALS

<u>BRAND</u>	<u>COMPANY NAME AND ADDRESS</u>	<u>BRAND</u>	<u>COMPANY NAME AND ADDRESS</u>
AGRIPRO	Agripro Seeds 4850 W. 350N. Danville, IM 46122	GREAT LAKES	Great Lakes Hybrids 9915 W. M-21 Ovid, MI 48866
ANDERSON CLASSIC	The Andersons, Inc. P.O. Box 119 Maumee, OH 43537	GRIES	Gries Seed Farms, Inc. 2348 N. Fifth Street Fremont, OH 43420
ASGROW	Monsanto Seed 3100 Sycamore Rd. DeKalb, IN 50322-7570	GUTWEIN	Gutwein Seed 15691 West 600 South Francesville, IN 47946
BAYSIDE	Bayside Seeds 259 Bowker Rd. Munger, MI 48747	HIGH CYCLE	Trelay Seed Co. 11623 Hwy 80 Livingston, WI 53554
BECK'S	Beck's Hybrids 6767 E. 276 <sup>th</sup> Street Atlanta, MI 46031	LG SEEDS	LG Seeds 1122 East 169 <sup>th</sup> St. Westfield, IN 46074
BIO GENE	Bio Gene 5491 Tri County Hwy. Sardinia, OH 45171	MIDWEST	Midwest Seed Genetics P.O. Box 518 Carroll, IA 51401
BROWN	Brown Seed Farms 720 St. Croix St. Prescott, WI 54021	MYCOGEN	Mycogen Seeds 1340 Corporate Center Curve Eagan, MN 55121-1233
CARGILL	Cargill Hybrid Seeds P.O. Box 5645 Minneapolis, MN 55110	NOVARTIS	Novartis Seeds Inc. 28377 S. Kristina Cr. Paw Paw, MI 49079
CORN BELT	Corn Belt Hybrids P.O. Box 95 St. Marys, OH 45885	PFISTER	Pfister Hybrid Corn Co. P.O. Box 187 El Paso, IL 61738
CROW'S	Crow's Hybrid Corn Co. P.O. Box 306 Milford, IL 60953	PIONEER	Pioneer Hi-Bred International Inc. P.O. Box 756 Bryan, OH 43506
DAIRYLAND	Dairyland Seed Company, Inc. P.O. Box 958 West Bend, WI 53095	PRO SEED	Pro Seed Technologies, Inc. 25 E. Loop Rd. Stony Brook, NY 11790
DEKALB	Monsanto Seed 3100 Sycamore Rd. DeKalb, IL 60115	RENK	Renk Seed Co. R-2 6800 Wilburn Rd. Sun Prairie, WI 53590
DYNA-GRO	UAP- Great Lakes 221 W. Lake Lansing, Ste. 102 East Lansing, MI 48823	RUPP	Rupp Seed Inc. 17919 Co. Ro. B Wauseon, OH 43567
GARST/AGRIPRO GARST	Garst Seed Co. 9877 W. Britton Rd. Laingsburg, MI 48848	STEYER	Steyer Seeds 6154 N. Co. Rd. 33 Tiffin, OH 44883
GEERTSON	Geertson Seed Farm 1665 Burroughs Rd. Adrian, OR 97901	TRELAY	Trelay Seed Co. 11623 Hwy 80 Livingston, WI 53554
GENESIS	Genesis Brand Seed P.O. Box 21085 Lansing, MI 48909	VIGORO	Royster-Clark, Inc. 70 N. Market St. Mt. Sterling, OH 43143
GOLDEN HARVEST	Golden Harvest Sommer Bros. Seed Co. P.O. Box 248 Pekin, IL 61555	WOLF RIVER	Wolf River Valley Seeds N2976 County M White Lake, WI 54491

## CONTRIBUTORS:

### MICHIGAN STATE UNIVERSITY

Kurt D. Thelen, Assistant Professor  
Keith Dysinger, Research Assistant  
William D. Widdicombe, Research Technician

*- Department of Crop and Soil Sciences -*

Michael Allen, Assistant Professor  
David E. Main, Research Assistant

*- Department of Animal Science -*

Jeff Andresen, Agricultural Meteorologist/  
Extension Specialist

*- Department of Geography -*



### MICHIGAN AGRICULTURAL EXPERIMENT STATION - OUTLYING STATIONS

Gerald Skeltis, Clarksville Horticultural Experiment Station  
Paul Horny, Saginaw Valley Beet & Bean Research Farm  
Paul Naasz, Upper Peninsula Experiment Station, Chatham  
Douglas G. Nielsen, Lake City Experiment Station

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