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Michigan Corn Production Hybrids Compared

Michigan State University Extension Service

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Michigan Corn Production

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HYBRIDS COMPARED 1994

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Michael Allen, and David Main**

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

Many hybrids are offered for sale in Michigan. They differ in yield capacity, maturity, lodging resistance, and other characteristics. Choosing the best corn hybrids is an important part of profitable corn production. By planting the hybrids best suited to the individual farm location, a grower can obtain higher yields with little or no increase in total production costs. Seed of hybrids with the best performance records in Michigan will generally cost no more than seed of hybrids with lower performance ratings.

The highest yielding hybrids in the 1993 trials produced 30 bushels more per acre than the average of 498 hybrids tested (Table A) and 67 bushels more than the lowest yielding hybrids. Eleven trial locations containing 20 tests were harvested for grain yield. Average yield of all hybrids grown in Zone I was 170, Zone II was 174, Zone III was 150, and Zone IV was 92. The average moisture for the early maturity hybrid

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TABLE A
AVERAGE, HIGHEST AND LOWEST GRAIN YIELD
MOISTURE CONTENT, AND STALK LODGING AT 11 LOCATIONS IN 1993

County - Location	No. of Hybrids	Bushels per acre			% Moisture			% Stalk Lodging		
		Average	Highest	Lowest	Average	Highest	Lowest	Average	Highest	Lowest
Monroe - Early	81	166	198	136	21	26	16	2	6	0
Late	81	173	207	133	26	30	21	1	6	0
Branch - Early	81	168	194	137	21	28	16	1	4	0
Late	81	154	180	124	29	34	22	2	10	0
Cass - Early	81	172	207	78	20	25	15	2	8	0
Late	81	185	215	154	26	33	21	1	4	0
Early-Late Averages Zone 1		169-171	195-195	143-147	21-27	25-31	16-22	2-1	5-7	.2-0
Kent - Early	72	179	214	147	22	31	18	3	14	0
Late	72	175	212	144	29	38	24	3	11	0
Ingham - Early	72	168	207	125	23	29	18	2	17	0
Late	72	184	212	151	31	38	24	1	5	0
Saginaw - Early	72	168	192	147	23	29	19	2	9	0
Late	72	170	195	142	27	33	22	2	7	0
Early-Late Averages Zone 2		171-176	198-200	149-152	23-29	29-35	19-23	2-2	10-7	.2-0
Huron - Early	72	152	180	133	23	27	19	1	4	0
Late	64	158	189	119	28	37	22	1	4	0
Montcalm - Early	72	154	193	104	20	26	16	5	17	0
Late	64	161	190	130	27	36	21	1	3	0
Mason - Early	72	137	171	93	22	26	18	3	43	0
Late	64	143	167	100	27	38	21	2	7	0
Early-Late Averages Zone 3		147-154	172-177	126-131	22-27	26-37	18-22	3-1	15-3	0-.1
Alpena	56	93	121	62	36	48	24	2	10	0
Grand Traverse	56	91	110	68	32	44	24	1	3	0
Average Zone 4		92	116	70	34	45	24	1	6	0
Average-All Zones		158	188	121	26	33	20	1.9	9	0

group was 6 percent less than the late hybrids in Zone I and Zone II and 5 percent in Zone III. Stalk breakage averaged 9 percent for the hybrids with the highest amount of stalk lodging, 1.9 percent for the average and 0 percent for the lowest (Table A).

Entries

All seed companies are invited to enter hybrids in the trials each year. A fee is charged to cover some of the direct expenses.

Table 24 presents a list of all hybrids planted in the 1993 trials. At the 13 locations, 297 hybrids from 38 seed companies were tested for either grain or silage as 1569 entries. Company names used in association with hybrid numbers refer to the brand. The numbers are the companies' designations.

Methods

Three locations are identified in each of four maturity zones. These zones are based on growing degree-days established from long-term weather records. Hybrids to be tested in each zone are entered in all locations representing that zone. Hybrids tested at each location are assembled into an early and late group according to maturity ratings provided by the seed companies.

Two-row plots are used. Plots are 22 feet long with a 30-inch row spacing. At most locations planting rates are set at 28,300 seeds per acre and thinned to 27,700 plants per acre at the 12-18 inch stage of plant height. High yielding-irrigated plots in Cass and Montcalm counties were planted at 31,000 and thinned to 30,800. The remaining trials in Mason County and all zone IV trials are

planted at 26,400 but thinned back to 24,500 plants per acre. A three-replication, triple-lattice design is used throughout the testing program.

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

From seed packaging through harvest and data processing, each hybrid is identified only by a code number to assure that an unbiased estimate is made of each hybrid's potential. The code is deciphered after the data have been processed.

Stand are counted and thinned in June and July prior to tasseling. Lodging measurements are made at harvest counting all plants broken below the ear. Plots are harvested mechanically for both grain and silage. Moisture content and field weight were determined from shelled grain samples collected in automated test equipment mounted on a plot picker-sheller. Grain yields are reported at a standard 15.5 percent moisture. Silage yield estimates are based on an air-dried sample. Further evaluation by means of an in-vitro silage digestibility analysis was conducted by the Department of Animal Science.

Growing Conditions

All yield trials were planted between May 1 and May 17. Planting was timely. The monthly weather data for each test location is shown in Table B. The 1993 growing season was significantly warmer than the 1992 season but was still below long-term growing degree day averages at 8 of the 12 test locations.

Closer inspection reveals that all locations except Monroe were cooler than normal during May and June. Early growth of corn was delayed and this delay may have been associated widespread reports of herbicide damage. Warmer than normal temperatures in July and August fortunately were complemented by adequate rainfall.

September was cooler than normal. While most corn hybrids reached maturity, dry down was delayed in many locations.

Harvest was completed between October 14 and November 12. In 1993 Michigan farmers grew an estimated 2,200,000 acres of corn for grain with a state average of 110 bushels. Silage acreage was estimated at 330,000 acres with yields averaging about 8 tons per acre.

Silage

Six locations containing 9 tests were harvested for silage. Menominee County was harvested as silage in 1993. With late maturing corn, it was again determined to be the better option for yield results similar to 1992.

Trials conducted in Kent, Ingham, and Huron counties contain two maturity groups with yield data presented in Tables 17, 18, 19, and 20. Additional silage trials were conducted in Alpena and Missaukee counties in 1993, Tables 21, 22, and 23. The results obtained from the 1993 silage digestibility trials are also presented in these same tables. This is the third year that digestibility analyses have been made.

Chopped silage (fodder plus grain) samples were weighed. A representative sample collected for use in determining moisture content (air dried) was finely ground with sub samples taken for in-vitro analyses.

Results of four analyses are presented. They are:

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 or 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.

3. **NDF=Neutral detergent fiber.** This is a measure of the fiber content of the corn forage. Fiber must be fermented by microbes in the gastrointestinal tract to be utilized by ruminants. It is much less digestible than non-fiber constituents of the forage. Forages with high levels of NDF have lower energy. It is also a measure of the gut filling properties of the forage and high NDF decreases forage intake. A low NDF content is desirable.

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

***All analyses were determined by wet-chemical methods.**

How to Use This Bulletin

One-, two-, and three-year averages are presented for all hybrids tested during 1993, 1992, and 1991 wherever the data are available. One-year results are less reliable than two- or three-year averages and should be interpreted with more caution. Confidence in corn performance data increases with the number of years and locations of testing.

Yields averaged from the three-location entry system have been included. Tables 4, 8, 12, and 16 report the average measurements made on entries within a maturity zone.

The tables report the following information about the hybrids tested:

1. Average moisture content at harvest.
2. Average yield (in bushels) of shelled corn at 15.5 percent moisture.
3. Average percent of stalk lodging (plants broken below the ear at harvest).

TABLE B
PRECIPITATION, TEMPERATURE, AND GROWING DEGREE DAY SUMMARY
1993 GROWING SEASON

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	60.6	58.3	+2.3	68.1	67.8	+0.3	76.1	71.7	+4.4	74.3	69.9	+4.4	62.0	62.6	-.6	68.2	66.1	+2.2
	PPT	1.13	3.04	-1.91	4.60	3.30	+1.30	1.60	3.73	-2.13	1.15	3.20	-2.05	4.50	2.62	+1.88	12.98	15.89	-2.91
	GDD	394	353	+41	550	542	+8	781	658	+123	711	616	+95	394	432	-38	2830	2601	+229
BRANCH	TEMP	59.2	57.8	+1.4	65.5	67.2	-1.7	72.6	70.8	+1.8	71.0	69.2	+1.8	57.7	62.4	-4.7	65.2	65.5	-.3
	PPT	2.14	3.03	-.89	6.80	3.73	+3.07	3.17	4.01	-.84	5.58	3.40	+2.18	5.34	3.03	+2.31	23.03	17.20	+5.83
	GDD	356	342	+14	486	535	-49	697	646	+51	645	602	+43	285	427	-142	2469	2552	-83
CASS	TEMP	60.7	58.9	+1.8	67.7	68.2	-.5	74.5	71.6	+2.9	73.6	70.2	+3.4	60.3	63.4	-3.1	67.4	66.5	+.9
	PPT	2.34	3.07	-.73	10.86	3.84	+7.02	1.51	3.86	-2.35	4.38	3.36	+1.02	7.75	3.41	+4.34	26.84	17.54	+9.30
	GDD	391	379	+12	544	559	-15	751	661	+90	720	627	+93	345	457	-112	2751	2683	+68
KENT ZONE 2	TEMP	58.8	57.4	+1.4	65.7	67.1	-1.4	72.8	71.2	+1.6	71.6	69.5	+2.1	57.7	61.9	-4.2	65.3	65.4	-.1
	PPT	2.17	2.86	-.69	6.05	3.68	+2.37	1.83	2.95	-1.12	7.12	3.14	+3.98	8.10	3.24	+4.86	25.27	15.87	+9.40
	GDD	340	335	+5	495	530	-35	707	654	+53	670	610	+60	283	412	-129	2495	2541	-46
INGHAM	TEMP	58.0	57.5	+.5	65.0	67.0	-2.0	71.9	70.7	+1.2	70.1	69.0	+1.1	56.4	62.0	-5.6	64.3	65.2	-.9
	PPT	1.18	2.73	-1.55	3.99	3.54	+.45	3.30	3.02	+.28	3.98	3.12	+.86	5.54	2.50	+3.04	17.99	14.91	+3.08
	GDD	331	338	-7	480	530	-50	677	640	+37	625	598	+27	264	418	-154	2377	2524	-147
SAGINAW	TEMP	56.5	58.6	-2.1	64.3	68.2	-3.9	71.3	72.1	-.8	69.1	70.2	-1.1	55.8	62.9	-7.1	63.4	66.4	-3.0
	PPT	3.20	2.49	+.71	2.88	3.09	-.21	2.70	2.83	-.13	6.05	3.29	+2.76	3.81	2.76	+1.05	18.64	14.46	+4.18
	GDD	303	367	-64	467	555	-88	658	670	-12	603	624	-21	251	438	-187	2282	2654	-372
HURON ZONE 3	TEMP	54.6	55.2	-.6	62.4	64.9	-2.5	70.4	69.3	+1.1	69.9	67.8	+2.1	55.8	61.0	-5.2	62.6	63.6	-1.0
	PPT	2.46	2.58	-.12	2.92	2.88	+.04	3.04	2.93	+.11	5.25	3.01	+2.24	4.55	2.67	+1.88	18.22	14.07	+4.15
	GDD	260	298	-38	413	479	-66	672	602	+70	687	569	+118	241	387	-146	2273	2335	-62
MONTCALM	TEMP	55.9	57.7	-1.8	63.0	67.1	-4.1	70.7	71.0	-.3	67.9	69.3	-1.4	54.2	61.6	-7.4	62.3	65.3	-3.0
	PPT	3.03	2.88	+.15	4.00	3.43	+.57	2.45	2.50	-.05	8.23	3.84	+4.39	3.46	3.12	+.34	21.17	15.77	+5.40
	GDD	305	351	-46	437	536	-99	650	646	+4	579	603	-24	243	414	-171	2214	2550	-336
MASON	TEMP	54.4	54.4	0	61.9	63.6	-1.7	70.7	68.5	+2.2	70.0	67.2	+2.8	55.8	60.2	-4.4	62.6	62.8	-.2
	PPT	2.62	2.48	+.14	4.53	2.93	+1.60	3.63	2.18	+1.45	4.76	3.79	+.97	4.32	3.25	+1.07	19.86	14.63	+5.23
	GDD	240	273	-33	386	450	-64	648	587	+61	625	552	+73	258	365	-107	2157	2227	-70
ALPENA ZONE 4	TEMP	51.7	52.0	-.3	60.2	61.7	-1.5	69.8	66.6	+3.2	68.2	64.9	+3.3	53.8	57.2	-3.4	60.7	60.5	+.2
	PPT	2.49	2.78	-.29	4.00	3.12	+.88	1.71	3.11	-1.40	5.67	3.23	+2.44	1.51	3.08	-1.57	15.38	15.32	+.06
	GDD	214	251	-37	370	413	-43	615	534	+81	579	496	+83	239	317	-78	2017	2011	+6
GRAND TRAVERSE	TEMP	54.4	53.5	+.9	62.7	63.7	-1.0	70.6	68.8	+1.8	70.5	67.3	+3.2	56.7	59.3	-2.6	63.0	62.5	+.5
	PPT	2.23	2.48	-.25	3.08	3.15	-.07	2.19	2.88	-.69	3.25	2.93	+.32	4.80	3.60	+1.20	15.55	15.04	+.51
	GDD	252	273	-21	430	454	-24	642	587	+55	638	552	+86	265	348	-83	2227	2214	+13
MENOMINEE	TEMP	50.6	53.6	-3.0	58.9	62.7	-3.8	67.5	67.4	+.1	68.4	65.5	+2.9	54.8	57.0	-2.2	60.0	61.2	-1.2
	PPT	4.52	3.57	+.95	3.74	3.72	+.02	1.83	3.63	-1.80	1.83	3.86	-2.03	3.36	3.60	-.24	15.28	18.38	-3.10
	GDD	123	285	-162	306	438	-132	553	559	-6	578	513	+65	228	319	-91	1788	2114	-326

TEMP = 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 1993
NORM = Normals calculated over 30 year period (1951-1980)
DEV = Deviation of observed from normal

Data provided by: MSU-AGRICULTURAL METEOROLOGY OFFICE
Jeff Andresen and Tom Cate

Stalk breakage can be caused by corn borers and/or state rot diseases.

Hybrids are recorded in the tables in order of their approximate maturity in the current growing season (early to late), based on moisture at harvest.

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 and moisture content. The value calculated as the "least significant difference" or "LSD" is the amount that an individual hybrid would have to differ from the experiment average to be significantly different from that average.

Hybrids with yields significantly better than the average grain yield at each location are marked with an asterisk (*) in each table. Other agronomic information relative to each trial is given at the bottom of the table. 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 following map shows the locations of the trials, and it 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.

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



Planting Rate

The number of seeds sown per acre in Michigan has increased steadily over the past several years. Increased planting rates are not a guarantee of increased yields. High plant populations (28,000 or more per acre) should be considered only for fields consistently producing more than 125 bushels per acre. With high plant populations, rainfall deficiencies and other growing season stresses frequently result in no increase in yield and may actually result in decreased yield compared with a more modest plant population of approximately 24,000 plants per acre. Lodging and harvest losses are often greater at higher populations.

Maturity

Hybrids are listed in the tables in order of maturity (early to late), based on moisture content of the grain at harvest. This is usually a reasonably accurate measure of relative maturity in most years in Michigan. Early-maturing hybrids are generally lower in moisture content than later-

maturing hybrids. Differences among hybrids in rate of drying 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. Corn is considered to be mature when a black layer of cells forms at the base of the kernel. At this time, kernel moisture will be between 32 and 35 percent.

For Grain

It is better to choose an early hybrid (below average moisture content) than a late hybrid for grain. Data in the tables show that good yields do not totally depend on later maturity. On the average early maturing hybrids in 1993 produced about five bushels per acre less than the later maturing group. The cost of drying the 5-6 percent increased harvest moisture of the later maturity hybrids more than off-set the value of the yield gains. Advantages of early-maturing hybrids are:

- They usually mature before killing frosts.
- Adapted early hybrids generally yield as much or more than late hybrids in most areas of Michigan.
- Early hybrids with lower moisture content at harvest reduce drying costs and market discounts for moisture.
- Mature, dry corn makes better livestock feed.
- 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 may be possible with early hybrids on land not subject to erosion.

For Silage

A good rule of thumb for selecting a superior silage hybrid is to choose one that also has the potential for high grain production. High dry-weight production per acre is a better reason for choosing hybrids for silage than tons of green weight.

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

Other Considerations

Choose early hybrids for late plantings, low soil fertility, sandy and muck soils, and for corn that it is to be followed by a winter grain or cover crop. Experience has shown that when corn is grown under no-till operations a significant advantage results from the use of earlier maturity hybrids.

Some degree of "crop insurance" can be obtained by choosing two or three hybrids that differ slightly in their maturity. If one hybrid encounters unfavorable weather at a critical growth stage, another may be less affected and produce a good crop.

Even though you have been growing a hybrid that has given good results, you may be able to improve your average corn production by trying one or more hybrids with better records in these trials. Well tested new hybrids are worth consideration. It may be advisable to try a new hybrid in a strip in the same field with your present hybrid.

Ways to Reduce Stalk Lodging

Several stalk-rotting fungi may cause broken stalks at harvest and create a major problem in corn production. Stalk rot occurs when fungi increase rapidly after the plant has matured or when the plant dies prematurely. The highest incidence of stalk rot occurs in years when corn matures early and harvest is delayed. Infection and disease development are favored by warm, humid weather and abundant rainfall during the latter part of the growing season.

Hybrid resistance to stalk rot is only one of several factors that determine the extent of stalk breakage. There are no clear-cut cases of specific hybrids that can consistently be depended upon to resist stalk rot under all conditions of soil fertility, plant population, plant stress, and maturity. A major part of the difference in resistance to lodging appears to be mechanical—stiffer stalks do not break as soon when disease attacks.

The most effective practice to reduce losses from stalk rot is to harvest as soon as possible after maturity. Stalk breakage continues to increase rapidly when harvest is delayed. Early hybrids that mature in September will have more stalk breakage than late-maturing hybrids if harvest occurs in November and December.

There may be little or no advantage to planting the early-maturing hybrids if harvest is delayed.

To avoid problems, choose high-yielding, early-maturing hybrids, plant early and harvest early.

Ways to Avoid Moldy Corn in 1994

- Plant early.
- Plant early- to medium-maturing hybrids.
- Harvest early—during October. Weather problems and harvest losses increase with later harvest.
- Plan for adequate artificial drying. Drying in the field or in the crib is slow and undependable in Michigan. Ready access to drying facilities will permit more timely harvest and prevent high pre-harvest loss, a major factor in reduced corn profits.

Seed Supplies for 1994

Most corn seed production operations did not experience unusual production problems in 1993. Seed quality can be expected to be good for most hybrid combinations. A higher than normal demand is expected to continue for early and mid-season maturity hybrids. Fortunately, seed yields were generally high and adequate seed supplies are anticipated for 1994 planting.

TABLE 1

SOUTHERN MICHIGAN MONROE COUNTY TRIAL ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

ZONE 1

EARLY TRIAL (107 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHELS PER ACRE			% STALK LODGING			
	1993	YR	YR	1993	YR	YR	1993	YR	YR	
NORTHUP KING N4242	15.8	20	--	175.8	193	--	0.5	1	--	
CALLAHAN C7339	16.2	--	--	158.3	--	--	0.5	--	--	
CALLAHAN C7434X	16.9	--	--	144.0	--	--	1.5	--	--	
PAYCO 5331	17.6	--	--	172.2	--	--	2.5	--	--	
*CALLAHAN C7337	17.7	--	--	181.7	--	--	1.4	--	--	
PIONEER 3751	17.8	21	20	168.6	188	153	2.4	1	1	
CALLAHAN C7435X	17.8	--	--	162.3	--	--	4.9	--	--	
PAYCO 531	18.0	21	--	169.2	193	--	1.5	1	--	
*PIONEER 3723	18.3	21	20	194.1	201	167	3.3	2	2	
GOLDEN HARVEST H-2331	18.3	--	--	164.4	--	--	1.0	--	--	
DAIRYLAND STEALTH-1203	18.6	24	--	175.0	190	--	2.9	4	--	
PIONEER X1002U	18.8	--	--	159.2	--	--	1.5	--	--	
RENK RK617	19.0	--	--	176.4	--	--	0.6	--	--	
FILLER 19.3	--	--	--	164.7	--	--	0.0	--	--	
PIONEER 3573	19.4	23	21	175.0	200	172	2.3	1	2	
PIONEER 3733	19.6	24	21	176.1	189	156	2.3	1	2	
FILLER 19.7	--	--	--	138.9	--	--	3.2	--	--	
CARGILL 4327	19.8	25	--	151.9	190	--	2.9	2	--	
FILLER 19.9	--	--	--	155.0	--	--	2.5	--	--	
CROW'S 370	19.9	25	--	157.2	172	--	2.4	2	--	
CALLAHAN C7446X	20.0	--	--	154.0	--	--	2.7	--	--	
HYPERFORMER HS9408	20.1	25	--	162.5	180	--	0.9	1	--	
PIONEER 3563	20.1	23	--	177.6	192	--	0.5	0	--	
*CARGILL 4277	20.2	--	--	184.7	--	--	1.4	--	--	
AMCORN PSX4747	20.2	--	--	157.6	--	--	2.9	--	--	
GOLDEN HARVEST H-2349	20.3	--	--	160.2	--	--	0.9	--	--	
PAYCO 6431	20.4	--	--	167.3	--	--	2.3	--	--	
*GOLDEN HARVEST H-2390	20.5	24	--	181.2	198	--	1.4	1	--	
DAIRYLAND STEALTH-1207	20.6	24	--	155.3	184	--	3.6	2	--	
TERRA TR1050	20.7	24	--	174.2	184	--	2.4	4	--	
TERRA E1031	20.8	--	--	172.9	--	--	5.2	--	--	
RUPP XR1623	20.8	--	--	172.9	--	--	0.5	--	--	
PAYCO 7132	20.8	--	--	165.3	--	--	1.5	--	--	
FILLER 20.9	--	--	--	162.1	--	--	4.0	--	--	
DAIRYLAND STEALTH-1205	21.1	--	--	172.7	--	--	1.5	--	--	
PAYCO 6331	21.1	--	--	161.1	--	--	4.2	--	--	
CALLAHAN C7245	21.3	26	--	176.3	177	--	0.5	1	--	
CIBA 4384	21.4	--	--	166.4	--	--	1.4	--	--	
ASGROW RK523	21.4	26	--	180.6	195	--	3.9	3	--	
PRO-SEED Exp. 2810	21.4	--	--	155.2	--	--	2.0	--	--	
DAIRYLAND STEALTH-1208	21.4	--	--	169.9	--	--	1.4	--	--	
PAYCO 7031	21.4	--	--	170.6	--	--	2.1	--	--	
*STINE 1073	21.5	--	--	186.4	--	--	2.0	--	--	
*PIONEER X1032D	21.6	--	--	181.3	--	--	1.4	--	--	
*PIONEER 3527	21.8	25	23	196.5	207	179	0.0	0	1	
*PAYCO 711	21.8	25	--	186.8	206	--	1.4	1	--	
CIBA 4372	21.9	25	23	166.7	190	159	1.8	2	2	
*PIONEER 3515	21.9	25	--	192.9	208	--	1.4	1	--	
*PIONEER 3525	21.9	24	--	197.7	213	--	0.5	0	--	
BECK'S 48	21.9	26	--	144.0	176	--	1.6	1	--	
HYPERFORMER HY9385	22.0	--	--	153.3	--	--	2.8	--	--	
TOP FARM TFSx2104	22.0	--	--	163.4	--	--	1.0	--	--	
PAYCO 633	22.0	--	--	160.1	--	--	5.5	--	--	
FILLER 22.1	--	--	--	153.1	--	--	5.2	--	--	
CARGILL 5327	22.2	26	--	164.2	186	--	2.4	1	--	

(continued below)

LATE TRIAL (108 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHELS PER ACRE			% STALK LODGING			
	1993	YR	YR	1993	YR	YR	1993	YR	YR	
CARGILL X5307	20.5	--	--	178.0	--	--	1.4	--	--	
*HYPERFORMER HY9424	22.0	--	--	195.5	--	--	0.5	--	--	
RENK RK714	22.2	--	--	163.2	--	--	0.5	--	--	
FILLER 22.7	--	--	--	184.7	--	--	4.1	--	--	
AMCORN PSX9009	22.7	27	25	177.1	191	162	3.4	2	2	
*FILLER 22.9	29	--	--	195.9	196	--	0.0	0	--	
NORTHUP KING N5901	23.4	28	--	162.7	186	--	0.5	1	--	
FILLER 23.4	--	--	--	163.8	--	--	6.1	--	--	
NORTHUP KING N5220	23.6	--	--	165.2	--	--	1.4	--	--	
CARGILL SX269	23.8	29	26	176.5	185	147	2.4	2	1	
STINE 1080	24.3	--	--	159.9	--	--	2.0	--	--	
*FILLER 24.4	30	--	--	198.9	199	--	3.2	2	--	
MYCOGEN 6220	24.6	--	--	168.2	--	--	0.5	--	--	
ICI SEEDS N8562	24.6	--	--	163.8	--	--	1.4	--	--	
*CIBA 4494	24.7	--	--	189.3	--	--	0.5	--	--	
GOLDEN HARVEST H-2485	24.8	29	25	178.0	189	150	1.8	1	2	
*CROW'S 401	25.1	30	--	195.4	207	--	1.0	1	--	
NORTHUP KING N6484	25.2	--	--	162.1	--	--	0.5	--	--	
PIONEER 3394	25.2	29	26	177.9	197	164	0.0	0	1	
AMCORN PSX0020	25.2	--	--	171.9	--	--	1.5	--	--	
RENK RK812	25.3	30	--	157.2	192	--	1.9	2	--	
PAYCO 814	25.3	--	--	167.6	--	--	0.5	--	--	
*HYPERFORMER HY9487	25.4	--	--	207.1	--	--	1.0	--	--	
TRELLAY 9006	25.4	--	--	166.8	--	--	1.0	--	--	
ICI SEEDS 8513	25.4	30	--	185.1	201	--	0.9	1	--	
PIONEER 3357	25.5	30	27	172.8	182	167	0.5	1	1	
DAIRYLAND DX-1110	25.6	30	27	167.3	187	163	0.5	1	1	
RENK RK886	25.6	30	--	161.5	190	--	1.9	1	--	
PAYCO 7432	25.6	--	--	133.3	--	--	0.0	--	--	
*BECK'S 60MVP	25.6	--	--	206.4	--	--	0.5	--	--	
MYCOGEN 6890	25.7	--	--	159.3	--	--	2.0	--	--	
DAIRYLAND STEALTH-1212	25.7	--	--	179.4	--	--	2.4	--	--	
*VIGORO V1072	25.8	--	--	189.5	--	--	0.0	--	--	
GREAT LAKES GL581	25.9	--	--	168.0	--	--	1.0	--	--	
TERRA TR1101	25.9	32	--	177.1	183	--	1.4	1	--	
*TRI STATE TS574	25.9	--	--	189.2	--	--	0.0	--	--	
AMCORN PSX9292	25.9	30	26	150.6	184	156	0.5	0	1	
PIONEER 3293	26.0	30	27	151.1	180	155	3.0	2	2	
ASGROW RX707	26.1	31	--	186.5	194	--	3.3	2	--	
GEN-TECH 1073	26.1	--	--	161.8	--	--	2.7	--	--	
RUPP XR1808	26.1	30	27	182.9	195	170	0.5	1	1	
*HYPERFORMER HS9502	26.2	31	--	191.9	202	--	0.5	1	--	
HYPERFORMER HY9610	26.2	--	--	169.0	--	--	0.0	--	--	
AGRIGENE AG5660	26.2	29	--	179.9	207	--	1.4	2	--	
TRI STATE TS750	26.2	--	--	187.2	--	--	0.5	--	--	
GREAT LAKES GL583	26.3	29	26	175.9	197	168	0.9	1	2	
FILLER 26.3	--	--	--	182.6	--	--	1.0	--	--	
CARGILL 7877	26.3	31	27	158.2	183	164	0.0	1	2	
ICI SEEDS 8501	26.4	--	--	144.6	--	--	0.5	--	--	
CROW'S 445	26.4	--	--	184.3	--	--	1.0	--	--	
FILLER 26.5	--	--	--	176.0	--	--	1.0	--	--	
MYCOGEN 7220	26.6	--	--	168.9	--	--	0.0	--	--	
PAYCO 823	26.6	--	--	178.4	--	--	0.0	--	--	
*PIONEER 3241	26.7	31	28	191.8	198	169	1.4	1	1	
RUPP XR1824	26.7	--	--	167.9	--	--	0.5	--	--	

(continued below)

EARLY TRIAL (107 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
CROW'S	375	22.2	--	141.8	--	--	4.5	--	--
CALLAHAN	C7348	22.3	26	169.5	193	--	1.9	1	--
*TERRA	TR600E	22.4	--	185.2	--	--	0.5	--	--
TOP FARM	TFsx1107	22.4	26	155.5	179	148	1.0	1	1
FILLER		22.7	--	161.0	--	--	2.8	--	--
GRIES	GSF-4103	22.8	27	155.2	178	147	1.0	1	2
DAIRYLAND	STEALTH-1108	22.9	--	147.0	--	--	2.0	--	--
JACQUES	6970	23.1	27	159.8	195	--	2.4	2	--
AMCORN	PSX5757	23.3	25	145.0	165	137	1.0	2	2
CALLAHAN	C7249	23.3	27	170.9	184	153	1.0	1	2
*PIONEER	X1082P	23.5	--	190.5	--	--	3.0	--	--
TRI STATE	TS411	23.5	--	144.9	--	--	2.3	--	--
HYPERFORMER	HS9388	23.6	25	161.6	187	--	0.5	1	--
TRI STATE	TS536	23.8	--	164.2	--	--	1.9	--	--
RUPP	XR1739	24.3	28	176.3	199	161	1.0	1	1
VIGORO	V1052	24.4	--	137.3	--	--	3.2	--	--
ANDERSONS	PSX370	24.5	28	166.5	193	171	1.0	1	1
LEADER	SX533	24.6	--	166.2	--	--	0.9	--	--
*PRO-SEED	PS3104	24.6	28	191.7	207	180	1.5	1	3
BECK'S	57	25.0	29	157.8	192	154	1.9	1	1
GUTWEIN	2434	25.3	--	146.4	--	--	1.4	--	--
TRELA	8900	25.5	29	135.9	158	--	1.4	1	--
BECK'S	54XA	25.5	29	165.7	187	163	0.5	0	2
*RUPP	XR1677	25.6	29	184.0	212	--	2.5	1	--
CALLAHAN	C7252	25.7	28	144.5	175	147	0.9	1	2
VIGORO	V1032	26.0	--	161.4	--	--	3.0	--	--
AVERAGE		21.4	25	166.1	190	159	2.0	1	2
RANGE		15.8	20	135.9	158	137	0.0	0	1
		TO	TO	TO	TO	TO	TO	TO	TO
		26.0	29	197.7	213	180	5.5	4	3
LEAST SIGNIFICANT		1.2		14.6					
DIFFERENCE									
COEFFICIENT OF VARIANCE		9.1%							

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

LATE TRIAL (108 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
ASGROW	RX747	26.8	--	174.6	--	--	1.9	--	--
CARGILL	6227	26.8	30	174.6	203	173	2.5	2	3
CARGILL	6677	26.8	--	169.7	--	--	0.5	--	--
GUTWEIN	2474	27.0	30	148.1	180	--	1.4	1	--
PRAIRIE STREAM	SX412	27.0	--	154.4	--	--	3.5	--	--
ANDERSONS	PSX405	27.0	32	163.8	181	--	2.4	1	--
LEADER	SX574A	27.2	--	176.6	--	--	0.5	--	--
DAIRYLAND	STEALTH-1114	27.2	30	185.1	183	--	1.5	1	--
TRI STATE	TS555	27.3	--	169.5	--	--	2.9	--	--
*CROW'S	494	27.3	--	193.7	--	--	0.0	--	--
GOLDEN HARVEST	EX 552	27.4	--	175.6	--	--	1.4	--	--
PIONEER	3417	27.5	29	159.4	190	151	0.0	1	1
TERRA	TR1090	27.6	31	180.2	193	165	2.3	2	2
RUPP	XR1840	27.6	--	159.2	--	--	1.0	--	--
CALLAHAN	C7454X	27.7	--	145.7	--	--	0.9	--	--
*CARGILL	7897	27.9	--	188.1	--	--	0.5	--	--
*TOP FARM	TFsx1114	27.9	--	192.8	--	--	0.5	--	--
FILLER		27.9	--	173.1	--	--	1.5	--	--
STINE	92-329X	28.0	--	150.7	--	--	1.0	--	--
DAIRYLAND	STEALTH-1115	28.0	--	153.1	--	--	1.0	--	--
DYNA-GRO	5491 I PRO	28.2	--	161.0	--	--	0.5	--	--
STINE	1116A	28.2	31	167.1	190	--	1.0	1	--
GEN-TECH	1084	28.4	--	168.2	--	--	0.5	--	--
BECK'S	63MVP	28.5	32	170.5	189	--	2.1	1	--
BECK'S	6111	29.2	--	185.9	--	--	0.9	--	--
TRI STATE	TS788	29.8	--	166.8	--	--	1.9	--	--
AVERAGE		26.0	30	173.0	192	162	1.2	1	2
RANGE		20.5	27	133.3	180	147	0.0	0	1
		TO	TO	TO	TO	TO	TO	TO	TO
		29.8	32	207.1	207	173	6.1	2	3
LEAST SIGNIFICANT		1.1		14.4					
DIFFERENCE									
COEFFICIENT OF VARIANCE		8.6%							

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

	1993	1992	1991
PLANTED	May 11	May 12	May 20
HARVESTED	October 25	November 6	October 15
SOIL TYPE	Metamora-Corunna Sandy Loam	Corunna Sandy Loam	Metamora-Corunna Sandy Loam
PREVIOUS CROP	Corn	Soybeans	Corn
POPULATION	27,450	24,700	27,200
ROW WIDTH	30"	30"	30"
FERTILIZER	182-70-128	162-94-150	186-65-218
SOIL TEST: pH	5.5	5.8	5.7
P	103 (very high)	64 (high)	306 (very high)
K	344 (veryhigh)	320 (very high)	432 (very high)

FARM COOPERATOR: Jerry Kuehnlein, Monroe
COUNTY EXTENSION DIRECTOR: Dale Brose, Monroe
EXTENSION AGRICULTURAL AGENT: Paul Marks, Monroe

TABLE 2

SOUTHERN MICHIGAN

ZONE 1

BRANCH COUNTY TRIAL
ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

EARLY TRIAL (107 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
PAYCO	5331	16.4	--	--	172.2	--	--	2.0	--	--
AMCORN	PSX4747	16.6	--	--	157.2	--	--	3.4	--	--
FILLER		16.7	--	--	153.0	--	--	2.9	--	--
CALLAHAN	C7337	16.8	--	--	173.4	--	--	0.0	--	--
NORTHUP KING	N4242	16.9	19	--	168.7	180	--	0.0	0	--
PIONEER	3723	16.9	19	18	166.1	178	164	0.5	1	1
RENK	RK617	17.1	--	--	155.2	--	--	1.6	--	--
*CALLAHAN	C7435X	17.2	--	--	184.1	--	--	4.4	--	--
*PAYCO	6431	17.9	--	--	182.1	--	--	1.0	--	--
PIONEER	X1002U	18.0	--	--	155.5	--	--	0.5	--	--
*GOLDEN HARVEST	H-2349	18.0	--	--	192.4	--	--	0.5	--	--
CALLAHAN	C7245	18.0	21	--	171.8	179	--	1.0	1	--
PAYCO	531	18.1	20	--	180.5	193	--	0.5	1	--
PIONEER	3733	18.2	20	19	168.1	184	171	3.4	2	1
PAYCO	633	18.3	--	--	176.4	--	--	1.4	--	--
*PIONEER	3573	18.6	21	20	184.5	191	180	2.9	1	2
CALLAHAN	C7434X	18.7	--	--	158.4	--	--	3.9	--	--
CALLAHAN	C7339	18.8	--	--	151.0	--	--	1.5	--	--
PRO-SEED	Exp. 2810	18.9	--	--	158.0	--	--	2.1	--	--
TOP FARM	TFsx2104	18.9	--	--	161.9	--	--	1.5	--	--
*FILLER		19.0	--	--	185.8	--	--	0.5	--	--
DAIRYLAND	STEALTH-1207	19.0	21	--	148.3	152	--	3.5	2	--
HYPERFORMER	HY9385	19.1	--	--	160.5	--	--	2.4	--	--
STINE	1073	19.2	--	--	151.1	--	--	0.0	--	--
PAYCO	6331	19.2	--	--	164.7	--	--	2.0	--	--
*PIONEER	3563	19.4	21	--	190.0	189	--	0.0	0	--
GOLDEN HARVEST	H-2331	19.4	--	--	152.9	--	--	1.9	--	--
DAIRYLAND	STEALTH-1203	19.5	22	--	172.2	184	--	2.4	2	--
TOP FARM	TFsx1107	19.5	22	21	147.4	165	148	1.6	2	2
*DAIRYLAND	STEALTH-1205	19.6	--	--	194.4	--	--	0.5	--	--
DAIRYLAND	STEALTH-1108	19.7	--	--	160.4	--	--	0.5	--	--
CALLAHAN	C7446X	19.7	--	--	175.0	--	--	2.4	--	--
RUPP	XR1623	19.8	--	--	166.7	--	--	0.0	--	--
*PIONEER	3751	19.9	21	20	185.2	190	166	0.5	1	1
HYPERFORMER	HS9408	20.0	22	--	181.1	185	--	0.0	0	--
*PIONEER	X1032D	20.0	--	--	189.7	--	--	1.0	--	--
AMCORN	PSX5757	20.0	21	20	156.7	175	159	3.0	2	2
TERRA	TR1050	20.1	22	--	169.6	172	--	3.6	2	--
CROW'S	375	20.2	--	--	156.9	--	--	3.0	--	--
FILLER		20.3	--	--	161.9	--	--	1.0	--	--
CROW'S	370	20.3	22	--	171.0	179	--	0.0	1	--
*GOLDEN HARVEST	H-2390	20.3	21	--	190.3	187	--	1.0	1	--
*PIONEER	X1082P	20.4	--	--	185.9	--	--	0.6	--	--
HYPERFORMER	HS9388	20.5	22	--	146.8	163	--	2.4	3	--
CARGILL	4327	20.5	22	--	177.4	187	--	1.0	2	--
*PAYCO	711	20.5	23	--	182.1	184	--	2.4	2	--
TERRA	E1031	20.6	--	--	162.3	--	--	2.9	--	--
*TRI STATE	TS536	20.7	--	--	183.1	--	--	0.5	--	--
FILLER		20.9	--	--	156.5	--	--	1.0	--	--
*PIONEER	3527	20.9	23	21	188.1	189	176	0.5	1	1
DAIRYLAND	STEALTH-1208	20.9	--	--	159.2	--	--	0.5	--	--
FILLER		20.9	--	--	159.9	--	--	1.1	--	--
PAYCO	7132	20.9	--	--	158.5	--	--	0.0	--	--
PIONEER	3515	21.2	23	--	168.0	187	--	0.0	1	--
ASGROW	RX623	21.2	24	--	176.8	187	--	0.5	0	--

(continued below)

LATE TRIAL (108 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
HYPERFORMER	HY9424	21.7	--	--	145.7	--	--	0.5	--	--
NORTHUP KING	N5901	23.8	27	--	156.1	173	--	0.0	0	--
PAYCO	7432	24.0	--	--	152.6	--	--	2.0	--	--
ICI SEEDS	N8562	24.3	--	--	146.6	--	--	1.0	--	--
NORTHUP KING	N5220	25.1	--	--	138.1	--	--	0.5	--	--
RENK	RK714	25.1	--	--	153.3	--	--	0.5	--	--
FILLER		25.3	--	--	139.4	--	--	10.3	--	--
*PIONEER	3394	25.4	27	25	172.6	184	178	0.0	0	1
CARGILL	X5307	25.4	--	--	149.4	--	--	1.5	--	--
PAYCO	814	25.6	--	--	156.1	--	--	0.5	--	--
CALLAHAN	C7454X	25.6	--	--	132.9	--	--	0.0	--	--
GOLDEN HARVEST	H-2485	26.0	26	24	165.7	170	154	1.9	2	2
STINE	1116A	26.3	29	--	156.2	162	--	0.0	0	--
AGRIGENE	AG5660	26.5	27	--	140.4	165	--	0.0	1	--
AMCORN	PSX9292	26.9	29	26	149.5	170	157	1.1	1	1
*ASGROW	RX707	27.0	30	--	176.8	181	--	6.2	4	--
*GREAT LAKES	GL581	27.3	--	--	176.2	--	--	2.0	--	--
CARGILL	SX269	27.3	29	26	166.1	176	158	0.0	0	1
MYCOGEN	6220	27.5	--	--	164.2	--	--	0.0	--	--
ASGROW	RX747	27.6	--	--	154.7	--	--	1.5	--	--
CARGILL	6227	27.7	29	26	164.5	179	156	1.5	1	1
AMCORN	PSX9009	27.8	29	26	131.8	154	138	1.0	1	2
*PIONEER	3293	27.9	29	27	172.9	196	181	0.5	0	0
STINE	1080	27.9	--	--	160.3	--	--	2.5	--	--
GUTWEIN	2474	28.0	31	--	158.5	167	--	1.9	1	--
DYNA-GRO	5491 I PRO	28.1	--	--	145.4	--	--	1.4	--	--
*TRI STATE	TS574	28.1	--	--	171.4	--	--	1.0	--	--
PIONEER	3417	28.3	28	25	143.7	182	170	0.0	0	0
RUPP	XR1808	28.3	30	28	158.7	171	150	4.5	2	2
CARGILL	6677	28.4	--	--	150.2	--	--	2.4	--	--
*BECK'S	63MVP	28.4	31	--	168.8	177	--	1.0	1	--
*CROW'S	445	28.5	--	--	173.7	--	--	1.0	--	--
ANDERSONS	PSX405	28.6	30	--	155.4	173	--	0.5	0	--
VIGORO	V1072	28.7	--	--	140.1	--	--	1.0	--	--
PRAIRIE STREAM	SX412	28.7	--	--	139.2	--	--	2.6	--	--
FILLER		28.8	--	--	155.9	--	--	1.9	--	--
FILLER		28.9	29	--	142.1	162	--	1.5	1	--
CARGILL	7877	28.9	31	29	162.4	176	143	1.0	1	1
DAIRYLAND	STEALTH-1212	28.9	--	--	156.6	--	--	0.5	--	--
*PIONEER	3357	29.0	31	28	171.7	178	164	1.0	1	1
ICI SEEDS	8501	29.0	--	--	158.1	--	--	1.0	--	--
STINE	92-329X	29.1	--	--	145.9	--	--	0.0	--	--
BECK'S	60MVP	29.1	--	--	149.0	--	--	2.9	--	--
*TRI STATE	TS750	29.2	--	--	174.2	--	--	2.4	--	--
NORTHUP KING	N6484	29.3	--	--	162.4	--	--	0.5	--	--
ICI SEEDS	8513	29.3	31	--	161.4	173	--	0.0	0	--
AMCORN	PSX0020	29.3	--	--	147.5	--	--	0.5	--	--
CROW'S	401	29.4	31	--	157.5	182	--	1.5	1	--
MYCOGEN	7220	29.5	--	--	162.0	--	--	1.0	--	--
TOP FARM	TFsx1114	29.5	--	--	136.4	--	--	0.5	--	--
MYCOGEN	6890	29.8	--	--	161.2	--	--	1.0	--	--
FILLER		30.0	30	--	161.1	184	--	2.1	1	--
*DAIRYLAND	DX-1110	30.1	31	28	172.1	166	155	0.5	1	1
TRI STATE	TS788	30.2	--	--	154.4	--	--	1.0	--	--
GOLDEN HARVEST	EX 552	30.3	--	--	126.1	--	--	1.5	--	--

(continued below)

EARLY TRIAL (107 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
	1993	YR	YR	1993	YR	YR	1993	YR	YR
TRI STATE TS411	21.2	--	--	163.8	--	--	0.5	--	--
CALLAHAN C7249	21.5	24	22	147.6	166	155	0.5	0	0
CARGILL 4277	21.6	--	--	165.4	--	--	1.4	--	--
*PAYCO 7031	21.6	--	--	184.6	--	--	0.5	--	--
TERRA TR600E	21.7	--	--	167.3	--	--	1.7	--	--
CALLAHAN C7348	21.9	25	--	148.4	166	--	2.0	2	--
*PIONEER 3525	22.0	23	--	183.6	194	--	1.1	1	--
CIBA 4394	22.2	--	--	171.8	--	--	0.5	--	--
CIBA 4372	22.4	23	21	172.5	189	157	0.5	1	1
JACQUES 6970	22.4	25	--	179.6	186	--	0.0	2	--
TRELAY 8900	22.4	25	--	154.3	164	--	0.5	1	--
CARGILL 5327	22.6	24	--	165.6	182	--	2.7	3	--
BECK'S 48	22.6	24	--	147.9	174	--	1.1	1	--
FILLER	23.0	--	--	150.3	--	--	0.5	--	--
GRIES GSF-4103	23.4	25	23	171.3	177	161	0.5	1	1
VIGORO V1052	23.6	--	--	157.0	--	--	1.2	--	--
*RUPP XR1739	23.6	26	24	186.4	193	172	2.5	2	1
CALLAHAN C7252	24.2	26	24	176.5	181	168	1.9	1	1
ANDERSONS PSX370	24.3	27	24	177.9	182	167	1.0	1	1
RUPP XR1677	25.1	29	--	158.0	167	--	1.0	1	--
GUTWEIN 2434	25.4	--	--	162.3	--	--	1.4	--	--
BECK'S 54XA	25.5	27	25	169.5	178	162	0.0	1	1
LEADER SX533	25.8	--	--	156.7	--	--	0.0	--	--
BECK'S 57	26.5	28	27	136.8	172	149	0.0	0	0
VIGORO V1032	27.2	--	--	146.8	--	--	0.5	--	--
PRO-SEED PS3104	27.7	28	25	162.2	187	171	2.1	1	1
AVERAGE	20.6	23	22	167.5	180	164	1.3	1	1
RANGE	16.4	19	18	136.8	152	148	0.0	0	0
	TO	TO	TO	TO	TO	TO	TO	TO	TO
	27.7	29	27	194.4	194	180	4.4	3	2
LEAST SIGNIFICANT DIFFERENCE	1.7			14.6					
COEFFICIENT OF VARIANCE	9.0%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

LATE TRIAL (108 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
	1993	YR	YR	1993	YR	YR	1993	YR	YR
PAYCO 823	30.5	--	--	144.9	--	--	1.5	--	--
LEADER SX574A	30.6	--	--	156.2	--	--	1.5	--	--
CIBA 4494	30.7	--	--	158.5	--	--	1.6	--	--
GREAT LAKES GL583	30.7	30	27	161.7	178	158	1.5	2	1
DAIRYLAND STEALTH-1115	30.8	--	--	158.6	--	--	1.0	--	--
GEN-TECH 1084	31.0	--	--	144.9	--	--	1.0	--	--
HYPERFORMER HY9487	31.1	--	--	151.9	--	--	2.4	--	--
RUPP XR1824	31.1	--	--	160.6	--	--	1.0	--	--
*PIONEER 3241	31.2	32	29	179.7	182	174	0.0	0	1
FILLER	31.4	--	--	149.6	--	--	2.5	--	--
HYPERFORMER HS9502	31.5	32	--	163.6	172	--	4.8	2	--
TERRA TR1090	31.5	32	28	135.6	155	142	1.6	1	1
TRI STATE TS555	31.5	--	--	147.4	--	--	1.5	--	--
RENK RK812	31.5	33	--	165.7	172	--	2.9	1	--
RENK RK886	31.6	32	--	130.5	155	--	4.6	2	--
CROW'S 494	31.6	--	--	123.9	--	--	5.9	--	--
TRELAY 9006	31.9	--	--	152.7	--	--	2.9	--	--
TERRA TR1101	31.9	32	--	143.3	170	--	0.0	0	--
GEN-TECH 1073	32.1	--	--	151.3	--	--	1.0	--	--
HYPERFORMER HY9610	32.2	--	--	125.5	--	--	2.4	--	--
BECK'S 6111	32.2	--	--	149.7	--	--	4.0	--	--
FILLER	32.3	--	--	144.8	--	--	2.4	--	--
CARGILL 7897	32.8	--	--	150.6	--	--	1.5	--	--
RUPP XR1840	32.8	--	--	152.8	--	--	0.0	--	--
FILLER	32.9	--	--	148.4	--	--	0.5	--	--
DAIRYLAND STEALTH-1114	34.4	33	--	141.9	163	--	1.9	1	--
AVERAGE	29.0	30	27	153.6	172	159	1.6	1	1
RANGE	21.7	26	24	123.9	154	138	0.0	0	0
	TO	TO	TO	TO	TO	TO	TO	TO	TO
	34.4	33	29	179.7	196	181	10.3	4	2
LEAST SIGNIFICANT DIFFERENCE	2.2			13.2					
COEFFICIENT OF VARIANCE	8.9%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

1993
PLANTED May 11
HARVESTED November 5
SOIL TYPE Locke Fine Sandy Loam
PREVIOUS CROP Corn
POPULATION 26,500
ROW WIDTH 30"
FERTILIZER 110-0-0
SOIL TEST: pH 5.6
P 96 (high)
K 134 (low)

1992
PLANTED May 5
HARVESTED November 5
SOIL TYPE Teasdale Fine Sandy Loam
PREVIOUS CROP Corn
POPULATION 24,200
ROW WIDTH 30"
FERTILIZER 103-0-0
SOIL TEST: pH 6.6
P 200 (very high)
K 619 (very high)

1991
PLANTED May 12
HARVESTED October 14
SOIL TYPE Teasdale Fine Sandy Loam
PREVIOUS CROP Corn
POPULATION 26,600
ROW WIDTH 30"
FERTILIZER 99-0-90+sulfur
SOIL TEST: pH 6.1
P 114 (very high)
K 556 (very high)

FARM COOPERATOR: Neil Carpenter, Quincy
COUNTY EXTENSION DIRECTOR: Raymond Fast, Coldwater
EXTENSION AGRICULTURAL AGENT: Natalie Rector, Marshall

TABLE 3

SOUTHERN MICHIGAN

ZONE 1

CASS COUNTY-IRRIGATED TRIAL
ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

EARLY TRIAL (107 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
GOLDEN HARVEST	H-2349	15.3	--	--	160.6	--	--	2.2	--	--
GOLDEN HARVEST	H-2331	15.3	--	--	181.9	--	--	2.3	--	--
RENK	RK617	15.9	--	--	158.7	--	--	0.9	--	--
NORTHUP KING	N4242	16.1	20	--	179.7	178	--	0.9	1	--
PAYCO	5331	16.3	--	--	165.9	--	--	3.1	--	--
CALLAHAN	C7337	16.4	--	--	183.0	--	--	1.8	--	--
CALLAHAN	C7435X	16.5	--	--	173.3	--	--	4.4	--	--
PIONEER	3563	17.1	22	--	183.6	180	--	2.2	2	--
CALLAHAN	C7339	17.1	--	--	137.3	--	--	3.4	--	--
PIONEER	3723	17.2	20	18	159.5	170	178	3.8	3	4
PAYCO	531	17.2	20	--	162.1	170	--	0.4	2	--
*PIONEER	3751	17.3	21	19	171.7	172	170	1.8	2	3
*PIONEER	3733	17.6	21	19	196.5	188	185	3.2	3	6
PAYCO	6431	17.8	--	--	179.5	--	--	1.4	--	--
*PIONEER	3573	17.9	21	19	192.8	190	199	2.6	2	6
GOLDEN HARVEST	H-2390	17.9	21	--	78.4	118	--	7.6	5	--
CALLAHAN	C7434X	17.9	--	--	152.6	--	--	5.3	--	--
PIONEER	X1002U	18.1	--	--	161.7	--	--	5.6	--	--
*CARGILL	4277	18.2	--	--	206.7	--	--	1.8	--	--
AMCORN	PSX4747	18.4	--	--	147.9	--	--	4.0	--	--
PAYCO	6331	18.6	--	--	167.7	--	--	2.2	--	--
DAIRYLAND	STEALTH-1203	18.7	22	--	156.4	166	--	1.8	3	--
CROW'S	370	18.8	21	--	158.5	159	--	1.7	6	--
FILLER		18.9	--	--	157.2	--	--	0.9	--	--
PIONEER	X1032D	19.1	--	--	169.0	--	--	3.1	--	--
*CARGILL	4327	19.1	22	--	186.4	189	--	3.4	6	--
DAIRYLAND	STEALTH-1208	19.1	--	--	178.6	--	--	0.4	--	--
CALLAHAN	C7446X	19.2	--	--	168.5	--	--	1.3	--	--
RUPP	XR1623	19.3	--	--	179.0	--	--	0.0	--	--
PAYCO	633	19.3	--	--	156.8	--	--	5.3	--	--
DAIRYLAND	STEALTH-1207	19.4	22	--	153.8	156	--	3.1	6	--
*FILLER		19.5	--	--	195.7	--	--	2.3	--	--
STINE	1073	19.6	--	--	182.7	--	--	1.0	--	--
CARGILL	5327	19.6	24	--	182.4	184	--	1.7	3	--
FILLER		19.7	--	--	184.3	--	--	3.2	--	--
HYPERFORMER	HY9385	19.8	--	--	148.4	--	--	6.3	--	--
HYPERFORMER	HS9408	19.9	23	--	175.5	169	--	1.8	2	--
CALLAHAN	C7249	19.9	24	21	171.4	179	183	2.2	2	4
PIONEER	3515	20.0	24	--	181.5	192	--	2.2	1	--
TERRA	E1031	20.0	--	--	150.6	--	--	3.7	--	--
PAYCO	711	20.1	24	--	182.8	189	--	4.4	4	--
PAYCO	7031	20.1	--	--	182.7	--	--	0.0	--	--
*PRO-SEED	Exp. 2810	20.2	--	--	203.5	--	--	1.3	--	--
FILLER		20.4	--	--	160.0	--	--	1.8	--	--
DAIRYLAND	STEALTH-1108	20.4	--	--	151.6	--	--	3.9	--	--
*PIONEER	3527	20.5	23	21	199.6	201	204	0.5	1	1
DAIRYLAND	STEALTH-1205	20.5	--	--	181.4	--	--	0.9	--	--
TOP FARM	TFsx2104	20.5	--	--	134.7	--	--	3.6	--	--
TOP FARM	TFsx1107	20.5	23	21	182.6	180	171	0.0	1	3
CALLAHAN	C7245	20.6	22	--	147.0	155	--	0.0	2	--
BECK'S	48	20.8	23	--	180.2	180	--	1.4	2	--
JACQUES	6970	20.9	23	--	173.4	179	--	1.8	4	--
*PIONEER	3525	20.9	24	--	195.3	208	--	1.4	1	--
TERRA	TR1050	20.9	22	--	150.5	151	--	5.0	7	--
TERRA	TR600E	20.9	--	--	151.1	--	--	3.9	--	--

(continued below)

LATE TRIAL (108 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
FILLER		20.6	--	--	189.4	--	--	0.9	--	--
*HYPERFORMER	HY9424	21.7	--	--	205.2	--	--	0.9	--	--
*CARGILL	X5307	21.8	--	--	204.3	--	--	3.0	--	--
RENK	RK714	22.1	--	--	187.5	--	--	1.8	--	--
GOLDEN HARVEST	H-2485	22.4	24	21	175.0	172	170	0.4	3	6
NORTHUP KING	N5901	22.5	27	--	184.2	182	--	0.4	1	--
PAYCO	7432	23.0	--	--	161.8	--	--	1.9	--	--
AMCORN	PSX9009	23.1	26	23	175.3	176	181	1.3	1	2
NORTHUP KING	N5220	23.4	--	--	174.3	--	--	0.9	--	--
*PIONEER	3394	23.5	28	25	212.8	202	194	0.0	0	2
AGRIGENE	AG5660	23.5	25	--	165.3	170	--	0.4	5	--
PAYCO	814	23.5	--	--	183.7	--	--	0.9	--	--
*FILLER		23.7	27	--	206.3	190	--	0.9	1	--
ICI SEEDS	8513	23.8	27	--	195.2	183	--	2.2	2	--
FILLER		23.8	--	--	171.9	--	--	3.9	--	--
FILLER		24.2	28	--	186.4	187	--	1.3	1	--
PIONEER	3417	24.4	27	24	186.4	189	195	0.4	1	2
STINE	1080	24.4	--	--	177.3	--	--	0.4	--	--
FILLER		24.4	--	--	188.1	--	--	0.9	--	--
MYCOGEN	6220	24.7	--	--	184.1	--	--	2.2	--	--
*TRI STATE	TS750	24.7	--	--	203.1	--	--	0.9	--	--
AMCORN	PSX9292	24.8	28	25	172.3	172	178	0.9	4	4
RENK	RK812	24.9	28	--	173.5	184	--	1.7	1	--
CROW'S	445	24.9	--	--	192.8	--	--	0.9	--	--
*TRI STATE	TS574	25.0	--	--	203.1	--	--	0.9	--	--
DAIRYLAND	DX-1110	25.1	28	25	184.8	182	193	0.9	2	2
DYNA-GRO	5491 I PRO	25.2	--	--	166.3	--	--	2.2	--	--
GREAT LAKES	GL581	25.3	--	--	184.8	--	--	0.9	--	--
GEN-TECH	1084	25.4	--	--	153.5	--	--	0.4	--	--
STINE	1116A	25.4	28	--	184.6	181	--	1.7	2	--
BECK'S	6111	25.5	--	--	188.9	--	--	0.4	--	--
GREAT LAKES	GL583	25.6	27	24	173.9	186	184	0.0	1	2
CARGILL	SX269	25.7	29	25	192.0	185	176	1.3	2	5
CIBA	4494	25.8	--	--	197.4	--	--	0.4	--	--
CROW'S	401	25.9	29	--	187.1	185	--	0.0	0	--
GEN-TECH	1073	26.0	--	--	188.9	--	--	1.7	--	--
*DAIRYLAND	STEALTH-1212	26.0	--	--	199.1	--	--	1.7	--	--
STINE	92-329X	26.3	--	--	179.8	--	--	2.1	--	--
*PAYCO	823	26.3	--	--	202.7	--	--	0.4	--	--
*PIONEER	3293	26.4	30	27	204.5	201	205	0.0	0	1
ICI SEEDS	N8562	26.4	--	--	176.2	--	--	0.9	--	--
MYCOGEN	7220	26.6	--	--	192.6	--	--	1.4	--	--
HYPERFORMER	HY9487	26.6	--	--	178.3	--	--	0.4	--	--
PIONEER	3357	26.7	31	27	193.8	192	196	0.9	0	1
GUTWEIN	2474	26.8	29	--	194.6	195	--	2.6	2	--
MYCOGEN	6890	26.8	--	--	188.0	--	--	0.9	--	--
ASCROW	RX747	26.8	--	--	173.5	--	--	2.2	--	--
TERRA	TR1090	26.8	29	25	166.1	173	186	3.0	2	3
RUPP	XR1808	26.8	29	26	191.5	186	194	0.0	1	1
TRI STATE	TS555	27.0	--	--	180.4	--	--	0.4	--	--
TRELAY	9006	27.2	--	--	189.0	--	--	1.7	--	--
RENK	RK886	27.2	30	--	182.7	182	--	0.0	1	--
ANDERSONS	PSX405	27.2	28	--	172.1	176	--	0.9	1	--
CARGILL	6227	27.3	29	26	171.9	170	183	0.4	1	1
GOLDEN HARVEST	EX 552	27.4	--	--	180.8	--	--	0.0	--	--

(continued below)

EARLY TRIAL (107 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
CROW'S	375	20.9	--	162.9	--	--	2.7	--	--
FILLER		20.9	--	160.4	--	--	0.4	--	--
CIBA	4372	21.0	23	176.2	173	179	1.3	3	5
TRI STATE	TS411	21.0	--	180.1	--	--	1.9	--	--
HYPERFORMER	HS9388	21.1	22	159.6	156	--	2.2	9	--
*PAYCO	7132	21.5	--	192.1	--	--	2.4	--	--
AMCORN	ASX5757	21.5	23	134.2	138	156	4.7	6	9
ASGROW	RX623	21.8	24	177.7	176	--	2.7	2	--
TRELAY	8900	21.8	24	140.1	150	--	1.3	1	--
*PIONEER	X1082P	22.2	--	204.1	--	--	1.3	--	--
TRI STATE	TS536	22.2	--	182.0	--	--	1.3	--	--
*FILLER		22.3	--	197.3	--	--	3.3	--	--
GRIES	GSF-4103	22.6	24	169.6	173	158	3.5	3	5
VIGORO	V1032	22.6	--	152.8	--	--	1.4	--	--
*CALLAHAN	C7252	22.6	24	196.3	192	189	0.5	2	4
*GUTWEIN	2434	22.9	--	202.3	--	--	0.9	--	--
PRO-SEED	PS3104	23.6	26	168.9	176	185	0.5	1	2
ANDERSONS	PSX370	23.6	25	178.7	191	179	0.5	1	3
*CIBA	4394	23.9	--	198.8	--	--	0.4	--	--
CALLAHAN	C7348	24.0	25	164.4	185	--	3.6	2	--
BECK'S	54XA	24.1	26	185.3	188	190	0.9	1	2
*LEADER	SX533	24.2	--	189.5	--	--	1.3	--	--
RUPP	XR1739	24.5	26	162.3	172	186	0.5	2	6
*BECK'S	57	24.5	27	189.6	193	198	1.3	1	3
VIGORO	V1052	24.7	--	185.6	--	--	2.3	--	--
*RUPP	XR1677	24.8	28	191.4	189	--	2.2	2	--
AVERAGE		20.1	23	171.8	175	182	2.2	3	4
RANGE		15.3	20	78.4	118	156	0.0	1	1
		24.8	28	206.7	208	204	7.6	9	9
LEAST SIGNIFICANT		1.2		14.2					
DIFFERENCE									
COEFFICIENT OF VARIANCE		8.6%							

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

LATE TRIAL (108 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
CARGILL	6677	27.5	--	181.8	--	--	1.8	--	--
TOP FARM	TFsx1114	27.5	--	192.7	--	--	0.4	--	--
TERRA	TR1101	27.6	30	192.0	185	--	0.4	2	--
DAIRYLAND	STEALTH-1115	27.6	--	178.8	--	--	2.2	--	--
PRAIRIE STREAM	SX412	27.6	--	187.6	--	--	1.8	--	--
*PIONEER	3241	27.7	29	214.8	209	212	1.3	1	1
ASGROW	RX707	27.7	31	177.9	178	--	1.3	1	--
FILLER		27.7	--	191.5	--	--	1.4	--	--
CALLAHAN	C7454X	27.7	--	163.3	--	--	1.8	--	--
NORTHROP KING	N6484	28.1	--	178.0	--	--	0.4	--	--
BECK'S	63MVP	28.1	31	183.2	175	--	1.8	1	--
VIGORO	V1072	28.3	--	182.2	--	--	0.4	--	--
FILLER		28.5	--	176.2	--	--	0.9	--	--
*CROW'S	494	28.6	--	207.8	--	--	0.9	--	--
*BECK'S	60MVP	28.6	--	203.5	--	--	1.3	--	--
LEADER	SX574A	28.7	--	183.9	--	--	1.8	--	--
HYPERFORMER	HS9502	28.7	30	173.4	175	--	0.0	1	--
CARGILL	7877	28.7	32	179.5	190	193	0.9	1	3
AMCORN	PSX0020	28.7	--	182.6	--	--	2.2	--	--
HYPERFORMER	HY9610	29.0	--	173.0	--	--	0.4	--	--
ICI SEEDS	8501	29.0	--	182.3	--	--	1.7	--	--
RUPP	XR1824	29.5	--	186.5	--	--	0.0	--	--
DAIRYLAND	STEALTH-1114	29.7	31	185.2	182	--	0.4	0	--
TRI STATE	TS788	30.1	--	185.5	--	--	0.4	--	--
RUPP	XR1840	30.1	--	182.9	--	--	1.7	--	--
CARGILL	7897	32.7	--	179.0	--	--	1.3	--	--
AVERAGE		26.2	29	185.0	184	189	1.1	1	2
RANGE		20.6	24	153.5	170	170	0.0	0	1
		32.7	32	214.8	209	212	3.9	5	6
LEAST SIGNIFICANT		1.6		12.9					
DIFFERENCE									
COEFFICIENT OF VARIANCE		7.2%							

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

1993
PLANTED May 1
HARVESTED October 14
SOIL TYPE Oshtemo Sandy Loam
PREVIOUS CROP Corn
POPULATION 29,750
ROW WIDTH 30"
FERTILIZER 197-40-10+zinc
SOIL TEST: pH 5.9
P 143 (very high)
K 412 (very high)
IRRIGATION 5 inches

1992
PLANTED May 5
HARVESTED November 11
SOIL TYPE Oshtemo Sandy Loam
PREVIOUS CROP Corn
POPULATION 26,600
ROW WIDTH 30"
FERTILIZER 202-40-130+zinc
SOIL TEST: pH 6.8
P 192 (very high)
K 515 (very high)
IRRIGATION 2.5 inches

1991
PLANTED May 8
HARVESTED October 12
SOIL TYPE Oshtemo Sandy Loam
PREVIOUS CROP Corn
POPULATION 27,100
ROW WIDTH 30"
FERTILIZER 214-40-128+sulfur+zinc
SOIL TEST: pH 6.1
P 224 (very high)
K 497 (very high)
IRRIGATION 7 inches

FARM COOPERATORS: Dave and Melvin Cripe, Cassopolis
COUNTY EXTENSION DIRECTOR: Lois Marsh, Cassopolis
COUNTY EXTENSION AGRICULTURAL AGENT: Ronald Hayden, Cassopolis

TABLE 4

SOUTHERN MICHIGAN

ZONE 1

AVERAGE OF MONROE, BRANCH, & CASS COUNTY TRIALS
ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

EARLY TRIAL (107 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
		1993	2	3	1993	2	3	1993	2	3
NORTHROP KING PAYCO *CALLAHAN CALLAHAN RENK	N4242 5331 C7337 C7435X RK617	16.3	20	--	174.7	184	--	0.5	1	--
		16.8	--	--	170.1	--	--	2.5	--	--
		17.0	--	--	179.4	--	--	1.1	--	--
		17.2	--	--	173.2	--	--	4.6	--	--
		17.3	--	--	163.4	--	--	1.0	--	--
CALLAHAN PIONEER GOLDEN HARVEST PAYCO CALLAHAN	C7339 3723 H-2331 531 C7434X	17.4	--	--	148.9	--	--	1.8	--	--
		17.5	20	19	173.2	183	177	2.5	2	2
		17.7	--	--	166.4	--	--	1.7	--	--
		17.8	21	--	170.6	185	--	0.8	1	--
		17.8	--	--	151.7	--	--	3.6	--	--
GOLDEN HARVEST PIONEER PIONEER FILLER AMCORN	H-2349 X1002U 3751 PSX4747	17.9	--	--	171.1	--	--	1.2	--	--
		18.3	--	--	158.8	--	--	2.5	--	--
		18.3	21	20	175.2	183	170	1.6	1	2
		18.4	--	--	149.7	--	--	2.3	--	--
		18.4	--	--	154.2	--	--	3.4	--	--
*PIONEER *PIONEER PAYCO *PIONEER DAIRYLAND	3733 3573 6431 3563 STEALTH-1203	18.5	21	20	180.2	187	179	3.0	2	4
		18.6	22	20	184.1	194	191	2.6	1	4
		18.7	--	--	176.3	--	--	1.6	--	--
		18.9	22	--	183.7	187	--	0.9	1	--
		18.9	23	--	167.9	180	--	2.4	3	--
*FILLER PAYCO GOLDEN HARVEST CALLAHAN DAIRYLAND	6331 H-2390 C7446X STEALTH-1207	19.3	--	--	178.3	--	--	1.2	--	--
		19.6	--	--	164.5	--	--	2.8	--	--
		19.6	22	--	150.0	168	--	3.3	2	--
		19.6	--	--	165.8	--	--	2.1	--	--
		19.7	23	--	152.5	164	--	3.4	3	--
CROW'S CARGILL PAYCO HYPERFORMER *CARGILL	370 4327 633 HS9408 4277	19.7	23	--	162.2	170	--	1.4	3	--
		19.8	23	--	171.9	189	--	2.4	3	--
		19.9	--	--	164.4	--	--	4.1	--	--
		20.0	23	--	173.0	178	--	0.9	1	--
		20.0	--	--	185.6	--	--	1.5	--	--
RUPP CALLAHAN STINE *PIONEER PRO-SEED	XR1623 C7245 1073 X1032D Exp.2810	20.0	--	--	172.9	--	--	0.2	--	--
		20.0	23	--	165.0	170	--	0.5	1	--
		20.1	--	--	173.4	--	--	1.0	--	--
		20.2	--	--	180.0	--	--	1.8	--	--
		20.2	--	--	172.2	--	--	1.8	--	--
HYPERFORMER FILLER *DAIRYLAND TERRA DAIRYLAND	HY9385 STEALTH-1205 E1031 STEALTH-1208	20.3	--	--	154.1	--	--	3.8	--	--
		20.4	--	--	171.4	--	--	2.4	--	--
		20.4	--	--	182.8	--	--	1.0	--	--
		20.5	--	--	161.9	--	--	3.9	--	--
		20.5	--	--	169.2	--	--	0.8	--	--
TOP FARM TERRA TOP FARM *PAYCO *PIONEER	TFsx2104 TR1050 TFsx1107 711 3515	20.5	--	--	153.3	--	--	2.0	--	--
		20.6	22	--	164.8	169	--	3.7	4	--
		20.8	24	22	161.8	175	161	0.9	1	2
		20.8	24	--	183.9	193	--	2.7	2	--
		21.0	24	--	180.8	195	--	1.2	1	--
DAIRYLAND *PAYCO FILLER *PIONEER CROW'S	STEALTH-1108 7031 161.0 3527 375	21.0	--	--	153.0	--	--	2.1	--	--
		21.0	--	--	179.3	--	--	0.9	--	--
		21.1	--	--	161.0	--	--	1.9	--	--
		21.1	24	22	194.7	199	193	0.3	1	1
		21.1	--	--	153.9	--	--	3.4	--	--

(continued below)

LATE TRIAL (108 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
		1993	2	3	1993	2	3	1993	2	3
*HYPERFORMER CARGILL RENK NORTHROP KING NORTHROP KING	HY9424 X5307 RK714 N5901 N5220	21.8	--	--	182.1	--	--	0.6	--	--
		22.6	--	--	177.2	--	--	2.0	--	--
		23.1	--	--	168.0	--	--	0.9	--	--
		23.2	27	--	167.7	180	--	0.3	1	--
		24.0	--	--	159.2	--	--	0.9	--	--
FILLER PAYCO GOLDEN HARVEST AMCORN *PIONEER	7432 H-2485 PSX9009 3394	24.2	--	--	158.4	--	--	6.8	--	--
		24.2	--	--	149.2	--	--	1.3	--	--
		24.4	26	23	172.9	177	166	1.4	2	3
		24.5	27	24	161.4	174	165	1.9	1	2
		24.7	28	25	187.8	195	187	0.0	0	1
PAYCO ICI SEEDS FILLER FILLER AGRIGENE	814 N8562	24.8	--	--	169.1	--	--	0.6	--	--
		25.1	--	--	162.2	--	--	1.1	--	--
		25.3	29	--	174.8	182	--	0.9	1	--
		25.4	--	--	174.2	--	--	1.8	--	--
		25.4	27	--	161.9	181	--	0.6	3	--
STINE MYCOGEN *CARGILL AMCORN *FILLER	1080 6220 SX269 PSX9292	25.5	--	--	165.8	--	--	1.6	--	--
		25.6	--	--	172.2	--	--	0.9	--	--
		25.6	29	26	178.2	182	168	1.2	1	3
		25.9	29	26	157.5	175	171	0.8	2	2
		26.0	29	--	188.8	191	--	2.1	1	--
GREAT LAKES *ICI SEEDS *TRI STATE STINE *CROW'S	GL581 8513 TS574 1116A 445	26.2	--	--	176.3	--	--	1.3	--	--
		26.2	29	--	180.6	186	--	1.0	1	--
		26.3	--	--	187.9	--	--	0.6	--	--
		26.6	30	--	169.3	178	--	0.9	1	--
		26.6	--	--	183.6	--	--	1.0	--	--
PIONEER *TRI STATE PIONEER *CROW'S *ASCROW	3417 TS750 3293 401 RX707	26.7	28	25	163.2	187	183	0.1	1	1
		26.7	--	--	188.2	--	--	1.3	--	--
		26.8	30	27	176.2	192	189	1.2	1	1
		26.8	30	--	180.0	191	--	0.8	1	--
		26.9	31	--	180.4	184	--	3.6	2	--
DAIRYLAND *DAIRYLAND CALLAHAN *CIBA *PIONEER	DX-1110 STEALTH-1212 C7454X 4494 3357	26.9	30	26	174.7	178	177	0.6	1	1
		26.9	--	--	178.4	--	--	1.5	--	--
		27.0	--	--	147.3	--	--	0.9	--	--
		27.1	--	--	181.7	--	--	0.8	--	--
		27.1	31	28	179.4	184	179	0.8	1	1
ASGROW RUPP DYNA-GRO RENK GUTWEIN	RX747 XR1808 5491 I PRO RK812 2474	27.1	--	--	167.6	--	--	1.9	--	--
		27.1	30	27	177.7	184	175	1.7	1	1
		27.2	--	--	157.6	--	--	1.4	--	--
		27.2	30	--	165.5	183	--	2.2	1	--
		27.3	30	--	167.1	181	--	2.0	1	--
CARGILL MYCOGEN GREAT LAKES NORTHROP KING MYCOGEN	6227 6890 GL583 N6484 7220	27.3	30	26	170.3	184	176	1.5	1	1
		27.4	--	--	169.5	--	--	1.3	--	--
		27.5	29	25	170.5	187	174	0.8	1	2
		27.5	--	--	167.5	--	--	0.5	--	--
		27.6	--	--	174.5	--	--	0.8	--	--
VIGORO CARGILL ANDERSONS *HYPERFORMER FILLER	V1072 6677 PSX405 HY9487	27.6	--	--	170.6	--	--	0.5	--	--
		27.6	--	--	167.2	--	--	1.6	--	--
		27.6	30	--	163.8	177	--	1.3	1	--
		27.7	--	--	179.1	--	--	1.3	--	--
		27.7	--	--	171.8	--	--	1.4	--	--

(continued below)

EARLY TRIAL (107 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
	YR	YR	YR	YR	YR	YR	YR	YR	YR
PAYCO 7132	21.1	--	--	172.0	--	--	1.3	--	--
FILLER	21.3	--	--	157.8	--	--	2.2	--	--
*ASGROW RX623	21.5	25	--	178.4	186	--	2.4	2	--
CARGILL 5327	21.5	25	--	170.7	184	--	2.3	3	--
*PIONEER 3525	21.6	24	--	192.2	205	--	1.0	1	--
AMCORN PSX5757	21.6	23	21	145.3	159	159	2.9	3	5
CALLAHAN C7249	21.6	25	23	163.3	176	171	1.2	1	2
HYPERFORMER HS9388	21.7	23	--	156.0	169	--	1.7	4	--
TERRA TR600E	21.7	--	--	167.9	--	--	2.0	--	--
FILLER	21.7	--	--	167.5	--	--	2.1	--	--
CIBA 4372	21.8	24	21	171.8	184	170	1.2	2	3
BECK'S 48	21.8	24	--	157.4	177	--	1.4	1	--
TRI STATE TS411	21.9	--	--	162.9	--	--	1.6	--	--
*PIONEER X1082P	22.0	--	--	193.5	--	--	1.6	--	--
JACQUES 6970	22.1	25	--	170.9	187	--	1.4	3	--
TRI STATE TS536	22.2	--	--	176.4	--	--	1.2	--	--
*CIBA 4394	22.5	--	--	179.0	--	--	0.8	--	--
CALLAHAN C7348	22.7	26	--	160.8	181	--	2.5	2	--
GRIES GSF-4103	22.9	25	23	165.4	176	160	1.7	2	3
TRELA 8900	23.2	26	--	143.4	157	--	1.1	1	--
RUPP XR1739	24.1	27	24	175.0	188	182	1.3	1	3
ANDERSONS PSX370	24.1	27	24	174.4	189	175	0.8	1	2
VIGORO V1052	24.2	--	--	160.0	--	--	2.2	--	--
CALLAHAN C7252	24.2	26	24	172.6	183	176	1.1	1	2
GUTWEIN 2434	24.5	--	--	170.3	--	--	1.2	--	--
LEADER SX533	24.9	--	--	170.8	--	--	0.7	--	--
BECK'S 54XA	25.0	27	25	173.5	185	177	0.5	1	1
*RUPP XR1677	25.2	29	--	177.8	189	--	1.9	1	--
VIGORO V1032	25.3	--	--	153.7	--	--	1.6	--	--
PRO-SEED PS3104	25.3	28	25	174.3	190	184	1.4	1	2
BECK'S 57	25.3	28	26	161.4	186	176	1.1	1	1
AVERAGE	20.7	24	22	168.5	182	175	1.8	2	2
RANGE	16.3	20	19	143.4	157	159	0.2	1	1
	TO	TO	TO	TO	TO	TO	TO	TO	TO
	25.3	29	26	194.7	205	193	4.6	4	5
LEAST SIGNIFICANT DIFFERENCE	.8			8.2					
COEFFICIENT OF VARIANCE	8.9%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

LATE TRIAL (108 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
	YR	YR	YR	YR	YR	YR	YR	YR	YR
AMCORN PSX0020	27.7	--	--	167.3	--	--	1.4	--	--
STINE 92-329X	27.8	--	--	158.8	--	--	1.0	--	--
PRAIRIE STREAM SX412	27.8	--	--	160.4	--	--	2.6	--	--
PAYCO 823	27.8	--	--	175.3	--	--	0.6	--	--
*BECK'S 60MVP	27.8	--	--	186.3	--	--	1.6	--	--
CARGILL 7877	28.0	31	28	166.7	183	168	0.6	1	2
GEN-TECH 1073	28.1	--	--	167.3	--	--	1.8	--	--
ICI SEEDS 8501	28.1	--	--	161.7	--	--	1.1	--	--
RENK RK886	28.1	30	--	158.2	176	--	2.2	2	--
TRELA 9006	28.2	--	--	169.5	--	--	1.9	--	--
GEN-TECH 1084	28.3	--	--	155.5	--	--	0.6	--	--
TOP FARM TFSx1114	28.3	--	--	174.0	--	--	0.5	--	--
BECK'S 63MVP	28.3	31	--	174.2	180	--	1.6	1	--
GOLDEN HARVEST EX 552	28.4	--	--	160.8	--	--	1.0	--	--
FILLER	28.4	--	--	168.4	--	--	1.4	--	--
*PIONEER 3241	28.5	31	28	195.4	196	193	0.9	1	1
TERRA TR1101	28.5	31	--	170.8	179	--	0.6	1	--
FILLER	28.5	--	--	172.4	--	--	1.6	--	--
TERRA TR1090	28.6	31	27	160.6	174	171	2.3	2	2
TRI STATE TS555	28.6	--	--	165.8	--	--	1.6	--	--
LEADER SX574A	28.8	--	--	172.2	--	--	1.3	--	--
HYPERFORMER HS9502	28.8	31	--	176.3	183	--	1.8	2	--
DAIRYLAND STEALTH-1115	28.8	--	--	163.5	--	--	1.4	--	--
BECK'S 6111	29.0	--	--	174.8	--	--	1.8	--	--
HYPERFORMER HY9610	29.1	--	--	155.8	--	--	0.9	--	--
RUPP XR1824	29.1	--	--	171.7	--	--	0.5	--	--
CROW'S 494	29.2	--	--	175.1	--	--	2.3	--	--
TRI STATE TS788	30.0	--	--	168.9	--	--	1.1	--	--
RUPP XR1840	30.2	--	--	165.0	--	--	0.9	--	--
DAIRYLAND STEALTH-1114	30.4	31	--	170.7	176	--	1.3	1	--
CARGILL 7897	31.1	--	--	172.6	--	--	1.1	--	--
AVERAGE	27.1	30	26	170.5	183	176	1.3	1	2
RANGE	21.8	26	23	147.3	174	165	0.0	0	1
	TO	TO	TO	TO	TO	TO	TO	TO	TO
	31.1	31	28	195.4	196	193	6.8	3	3
LEAST SIGNIFICANT DIFFERENCE	1.0			7.6					
COEFFICIENT OF VARIANCE	8.2%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

TABLE 5

SOUTH CENTRAL MICHIGAN

ZONE 2

KENT COUNTY TRIAL-GRAIN
ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

EARLY TRIAL (102 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	2	3	1993	2	3	1993	2	3
		YR			YR			YR		
		1993	1992	1991	1993	1992	1991	1993	1992	1991
NORTHUP KING	N2933	18.3	--	--	162.5	--	--	3.8	--	--
CALLAHAN	C729	18.9	19	--	146.5	146	--	5.7	6	--
PIONEER	3861	19.2	--	--	176.9	--	--	2.4	--	--
*GOLDEN HARVEST	H-2331	19.3	20	19	192.3	199	199	1.4	2	3
*DEKALB	DK471	19.5	--	--	193.9	--	--	1.9	--	--
PAYCO	531	19.6	20	--	188.3	191	--	9.6	6	--
PAYCO	4211	19.6	--	--	170.1	--	--	7.7	--	--
PAYCO	413	20.1	--	--	173.6	--	--	3.0	--	--
NORTHUP KING	N2879	20.2	--	--	169.1	--	--	1.0	--	--
CALLAHAN	C7425X	20.2	--	--	168.5	--	--	5.3	--	--
GRIES	GSP-2393	20.4	20	--	147.9	152	--	2.5	2	--
DAIRYLAND	STEALTH-1198	20.4	22	21	183.6	185	196	13.6	9	8
RENK	RK617	20.4	21	--	189.1	183	--	2.9	8	--
GREAT LAKES	GL450	20.5	21	20	183.9	189	202	5.9	5	4
NORTHUP KING	N2442	20.5	22	20	185.6	187	188	1.4	1	2
BLANEY	2070	20.6	--	--	184.2	--	--	13.5	--	--
*DEKALB	DK493	20.6	--	--	199.6	--	--	0.0	--	--
HYPERFORMER	HY9334	20.7	--	--	181.3	--	--	10.6	--	--
*PIONEER	3723	20.7	23	21	199.8	192	204	0.5	1	2
AGRIGENE	AG3965	20.7	--	--	176.2	--	--	3.4	--	--
*STINE	993	20.8	--	--	204.4	--	--	2.9	--	--
PAYCO	5133	21.0	--	--	172.6	--	--	2.0	--	--
*CALLAHAN	C7337	21.0	22	--	192.1	192	--	6.3	6	--
*BLANEY	2100	21.3	--	--	212.4	--	--	1.4	--	--
*TRELAY	5200	21.3	22	--	202.1	191	--	8.6	10	--
*CARGILL	3777	21.4	--	--	190.7	--	--	1.0	--	--
CALLAHAN	C7339	21.4	--	--	163.0	--	--	1.9	--	--
HYPERFORMER	HS9330	21.6	22	--	161.8	166	--	1.4	1	--
AMCORN	PSX4747	21.8	--	--	166.7	--	--	0.5	--	--
GRIES	GSP-4100	21.9	24	--	167.4	168	--	2.5	3	--
*PIONEER	3769	21.9	--	--	196.0	--	--	1.4	--	--
*PIONEER	X1002U	21.9	--	--	200.4	--	--	1.9	--	--
*CALLAHAN	C7435X	21.9	--	--	193.4	--	--	3.0	--	--
BLANEY	4045	22.0	22	21	167.0	172	178	1.4	1	2
FILLER		22.1	22	--	163.2	164	--	1.0	2	--
TOP FARM	TFsx1097A	22.1	22	--	162.5	161	--	1.0	1	--
PAYCO	5131	22.1	--	--	187.3	--	--	3.0	--	--
PAYCO	5132	22.1	--	--	168.7	--	--	0.0	--	--
CIBA	4273	22.3	--	--	187.7	--	--	0.5	--	--
CALLAHAN	C7434X	22.3	--	--	168.5	--	--	1.9	--	--
TRELAY	5101	22.4	--	--	173.1	--	--	0.0	--	--
CARGILL	3427	22.5	24	22	160.2	171	182	3.8	3	3
FILLER		22.5	26	--	182.0	180	--	2.9	2	--
*PAYCO	5331	22.5	--	--	191.3	--	--	1.6	--	--
HYPERFORMER	HY9339	22.6	--	--	166.9	--	--	1.0	--	--
*FILLER		22.6	--	--	199.5	--	--	0.5	--	--
PIONEER	3751	22.7	23	21	174.7	177	186	1.0	2	2
*CIBA	4282	22.8	22	21	193.2	178	189	1.0	2	2
GUTWEIN	2120	22.8	22	--	163.5	166	--	1.4	1	--
NORTHUP KING	N3808	22.9	22	20	166.2	171	179	1.9	3	3

(continued below)

LATE TRIAL (103 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	2	3	1993	2	3	1993	2	3
		YR			YR			YR		
		1993	1992	1991	1993	1992	1991	1993	1992	1991
ICI SEEDS	8700	23.7	23	--	163.5	170	--	10.0	6	--
*PIONEER	3573	24.2	24	23	202.9	201	205	2.4	2	4
CROW'S	370	25.4	28	--	159.8	163	--	3.3	5	--
CALLAHAN	C7446X	25.8	--	--	172.0	--	--	1.9	--	--
STINE	1073	25.9	--	--	173.9	--	--	2.9	--	--
RENK	RK714	26.0	--	--	144.2	--	--	1.5	--	--
CALLAHAN	C7348	26.1	26	--	180.3	185	--	1.0	2	--
FILLER		26.2	27	25	181.8	179	182	2.9	1	2
CIBA	4372	26.3	26	24	173.8	184	190	3.8	3	4
PAYCO	6431	26.4	--	--	169.4	--	--	4.8	--	--
*DEKALB	DK554	26.8	28	--	193.5	190	--	6.7	4	--
CARGILL	4327	26.9	29	27	179.5	187	191	2.4	1	3
TERRA	E1031	27.1	--	--	174.1	--	--	10.0	--	--
CROW'S	210	27.1	26	24	167.3	169	174	3.3	3	4
AMCORN	PSX9009	27.1	29	27	162.5	177	184	3.4	2	3
GREAT LAKES	GL559	27.2	29	--	173.9	179	--	5.3	3	--
DYNA-GRO	5313 I PRO	27.2	--	--	158.1	--	--	2.9	--	--
FILLER		27.2	--	--	164.0	--	--	1.0	--	--
GOLDEN HARVEST	H-2485	27.2	28	26	174.3	172	177	10.0	7	6
*PIONEER	3527	27.4	28	25	195.5	200	209	0.0	0	1
STINE	1059	27.5	--	--	152.8	--	--	1.1	--	--
DAIRYLAND	STEALTH-1205	27.6	30	--	179.1	187	--	2.4	2	--
RUPP	XR1635	27.6	--	--	186.6	--	--	1.0	--	--
*PIONEER	3525	27.8	29	--	205.8	203	--	1.0	1	--
PAYCO	6331	27.8	--	--	167.1	--	--	5.2	--	--
PICKSEED	8855L	27.8	28	--	149.8	169	--	4.8	3	--
NORTHUP KING	N5220	28.0	--	--	154.1	--	--	2.4	--	--
HYPERFORMER	HY9424	28.0	--	--	178.0	--	--	1.5	--	--
TERRA	TR1050	28.2	28	--	158.5	163	--	10.5	6	--
DAIRYLAND	STEALTH-1108	28.2	--	--	177.9	--	--	2.4	--	--
TOP FARM	TFsx1107	28.2	30	27	165.8	178	183	2.4	1	2
TOP FARM	TFsx2104	28.3	--	--	170.9	--	--	1.9	--	--
CROW'S	375	28.4	--	--	177.6	--	--	1.9	--	--
HYPERFORMER	HY9385	28.5	--	--	179.4	--	--	1.4	--	--
*ICI SEEDS	8543	28.5	31	--	197.1	186	--	5.2	3	--
DAIRYLAND	STEALTH-1208	28.5	--	--	153.5	--	--	1.4	--	--
JACQUES	6970	28.8	32	--	178.3	181	--	1.4	1	--
CALLAHAN	C7245	28.8	27	--	145.9	150	--	7.1	6	--
*CARGILL	X5307	28.9	--	--	211.8	--	--	0.0	--	--
ASGROW	RX623	29.0	28	--	185.5	190	--	1.9	2	--
PRO-SEED	PS3104	29.3	30	28	174.9	177	192	7.6	4	3
CARGILL	6227	29.3	30	28	181.3	188	192	2.4	2	2
PIONEER	3515	29.4	30	--	186.3	194	--	0.0	0	--
VIGORO	V1052	29.4	--	--	180.0	--	--	0.5	--	--
TERRA	TR600E	29.4	--	--	175.5	--	--	0.0	--	--
*PIONEER	X1082P	29.5	--	--	199.4	--	--	0.0	--	--
STINE	1080	29.6	--	--	178.9	--	--	1.5	--	--
ANDERSONS	PSX345	29.7	29	26	156.7	166	177	8.1	5	4
CARGILL	SX269	29.9	31	28	185.2	185	203	1.0	1	2
ICI SEEDS	N8562	30.1	--	--	158.4	--	--	4.3	--	--

(continued below)

EARLY TRIAL (102 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
PAYCO	633	22.9	--	--	163.7	--	--	1.9	--	--
*DEKALB	DK512	23.2	26	--	200.9	195	--	0.0	1	--
ASGROW	RK497	23.2	--	--	173.5	--	--	3.3	--	--
FILLER		23.2	--	--	160.0	--	--	1.0	--	--
PAYCO	4421	23.2	--	--	167.0	--	--	0.5	--	--
FILLER		23.3	21	--	156.9	156	--	4.8	4	--
PIONEER	3733	23.4	23	22	182.6	181	184	1.4	2	2
RUPP	Exp. 1-201	23.4	--	--	163.6	--	--	2.4	--	--
GREAT LAKES	GL471	23.5	--	--	164.0	--	--	0.5	--	--
*DEKALB	DK485	23.7	23	22	193.1	186	199	1.9	2	2
FILLER		23.8	24	22	171.7	179	186	1.9	2	2
GOLDEN HARVEST	H-2349	23.9	--	--	181.9	--	--	1.0	--	--
GOLDEN HARVEST	H-2390	23.9	24	22	186.7	179	195	3.3	3	2
AMCORN	PSX5555	23.9	--	--	170.8	--	--	1.5	--	--
RUPP	RK1644	24.2	26	--	174.8	177	--	0.5	0	--
GREAT LAKES	GL496	24.6	24	23	169.7	171	180	2.5	3	4
GREAT LAKES	GL515	25.0	--	--	187.5	--	--	1.4	--	--
PAYCO	648	25.5	25	23	165.9	172	180	0.5	1	1
AMCORN	PSX5757	25.7	26	24	162.4	164	179	1.5	5	3
*ASGROW	RX510	26.4	--	--	214.1	--	--	0.5	--	--
*CARGILL	4277	27.7	--	--	194.5	--	--	1.0	--	--
*MYCOGEN	5440	31.3	--	--	193.5	--	--	0.5	--	--
AVERAGE		22.2	23	21	178.8	176	188	2.6	3	3
RANGE		18.3	19	19	146.5	146	178	0.0	0	1
		31.3	26	24	214.1	199	204	13.6	10	8
LEAST SIGNIFICANT DIFFERENCE		1.4			11.8					
COEFFICIENT OF VARIANCE		6.8%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

LATE TRIAL (103 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
CALLAHAN	C7249	30.1	31	28	158.2	170	181	0.5	1	1
CTBA	4394	30.2	--	--	181.1	--	--	0.0	--	--
*RUPP	RK1677	30.2	30	--	197.8	194	--	1.0	1	--
VIGORO	V1032	30.3	--	--	164.8	--	--	1.0	--	--
PRO-SEED	Exp. 2810	30.4	--	--	185.1	--	--	1.4	--	--
PAYCO	711	30.5	29	26	179.3	184	194	0.0	1	1
*CALLAHAN	C7252	30.5	32	29	195.5	191	199	1.0	1	1
CARGILL	5327	30.7	31	28	162.9	177	188	2.5	2	4
*RUPP	RK1808	30.7	34	--	194.2	190	--	1.4	1	--
PAYCO	7031	30.9	--	--	187.1	--	--	0.0	--	--
AMCORN	PSX9292	31.0	33	30	166.5	173	184	5.2	3	3
FILLER		31.1	--	--	168.2	--	--	7.2	--	--
RENK	RK812	31.4	32	--	172.3	186	--	1.9	2	--
CROW'S	445	31.6	--	--	163.6	--	--	1.4	--	--
DAIRYLAND	DX-1110	31.7	--	--	177.1	--	--	2.4	--	--
*PIONEER	3394	31.9	32	29	191.9	190	209	0.0	1	1
FILLER		32.6	--	--	181.9	--	--	1.4	--	--
MYCOGEN	6220	32.7	--	--	186.0	--	--	0.5	--	--
CROW'S	494	33.7	--	--	167.6	--	--	1.4	--	--
CARGILL	6677	34.0	--	--	186.2	--	--	1.0	--	--
HYPERFORMER	HY9487	34.1	--	--	182.9	--	--	1.9	--	--
CROW'S	401	38.4	36	--	157.3	177	--	2.9	2	--
AVERAGE		29.0	29	27	175.3	181	190	2.7	2	3
RANGE		23.7	23	23	144.2	150	174	0.0	0	1
		38.4	36	30	211.8	203	209	10.5	7	6
LEAST SIGNIFICANT DIFFERENCE		1.8			14.1					
COEFFICIENT OF VARIANCE		8.3%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

1993
PLANTED May 10
HARVESTED October 26
SOIL TYPE Spinks Loamy Sand
PREVIOUS CROP Corn
POPULATION 27,350
ROW WIDTH 30"
FERTILIZER 172-0-0
SOIL TEST: pH 5.9
P 122 (very high)
K 695 (very high)

1992
PLANTED May 5
HARVESTED November 19-20
SOIL TYPE Spinks Loamy Sand
PREVIOUS CROP Corn
POPULATION 25,700
ROW WIDTH 30"
FERTILIZER 192-0-0+manure
SOIL TEST: pH 6.8
P 138 (very high)
K 457 (very high)

1991
PLANTED May 10
HARVESTED October 11
SOIL TYPE Spinks Loamy Sand
PREVIOUS CROP Alfalfa Sod
POPULATION 27,700
ROW WIDTH 30"
FERTILIZER 123-0-0
SOIL TEST: pH 6.4
P 62 (high)
K 256 (high)

FARM COOPERATOR: Gerald Kayser, Caledonia
COUNTY EXTENSION DIRECTOR: William Harrison, Grand Rapids
EXTENSION AGRICULTURAL AGENT: William Steenwyk, Grand Rapids

TABLE 6

SOUTH CENTRAL MICHIGAN

INGHAM COUNTY TRIAL-GRAIN

ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

ZONE 2

EARLY TRIAL (102 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
NORTHROP KING	N2879	**	--	--	**	--	--	**	--	--
PIONEER	3861	18.3	--	--	163.4	--	--	2.4	--	--
BLANEY	2070	19.0	--	--	160.8	--	--	6.7	--	--
PAYCO	5131	19.8	--	--	154.6	--	--	4.4	--	--
NORTHROP KING	N2933	20.0	--	--	135.6	--	--	3.3	--	--
STINE	993	20.1	--	--	166.8	--	--	2.4	--	--
PAYCO	4211	20.1	--	--	155.8	--	--	9.2	--	--
NORTHROP KING	N3808	20.4	21	19	154.5	137	137	3.3	12	8
GRIES	GSP-239J	20.6	22	--	159.7	154	--	2.4	1	--
PAYCO	413	20.6	--	--	165.8	--	--	2.4	--	--
PIONEER	3769	20.9	--	--	155.0	--	--	0.5	--	--
NORTHROP KING	N4242	21.0	22	20	180.5	166	150	1.4	5	4
CALLAHAN	C7425X	21.0	--	--	162.5	--	--	1.4	--	--
*DEKALB	DK471	21.1	--	--	184.2	--	--	2.9	--	--
FILLER		21.1	19	--	161.0	130	--	0.0	0	--
GOLDEN HARVEST	H-2331	21.2	23	21	172.5	174	160	2.9	2	3
CARGILL	3777	21.3	--	--	164.9	--	--	2.4	--	--
*TRELAY	5200	21.4	23	--	187.7	188	--	1.4	1	--
PAYCO	531	21.5	23	--	177.5	183	--	1.0	1	--
GREAT LAKES	GL450	21.6	23	21	166.1	175	173	1.0	1	1
PAYCO	5132	21.6	--	--	161.7	--	--	4.3	--	--
DEKALB	DK493	21.7	--	--	167.9	--	--	1.0	--	--
PIONEER	3751	21.7	23	22	173.3	154	136	1.0	8	6
PAYCO	4421	21.7	--	--	175.5	--	--	4.4	--	--
CIBA	4273	21.9	--	--	172.0	--	--	2.0	--	--
*AGRIGENE	AG3965	21.9	--	--	187.8	--	--	1.0	--	--
BLANEY	2100	22.0	--	--	176.0	--	--	1.9	--	--
HYPERFORMER	HS9330	22.0	24	--	159.4	156	--	3.3	3	--
*DAIRYLAND	STEALTH-1198	22.2	23	21	185.0	182	163	1.9	3	3
RENK	RK617	22.2	23	--	161.9	183	--	2.0	1	--
AMCORN	PSX4747	22.2	--	--	153.6	--	--	1.0	--	--
CALLAHAN	C7434X	22.2	--	--	150.2	--	--	1.0	--	--
CIBA	4282	22.3	22	20	180.9	182	169	1.9	2	2
HYPERFORMER	HY9334	22.4	--	--	174.3	--	--	1.0	--	--
CARGILL	3427	22.4	24	22	149.9	116	107	10.5	33	24
CALLAHAN	C7339	22.4	--	--	159.6	--	--	3.3	--	--
GREAT LAKES	GL471	22.5	--	--	142.9	--	--	6.2	--	--
GUTWEIN	2120	22.7	23	--	165.7	164	--	1.4	2	--
*PAYCO	5331	22.7	--	--	182.3	--	--	2.0	--	--
CALLAHAN	C729	22.9	23	--	147.0	137	--	1.4	4	--
CALLAHAN	C7435X	22.9	--	--	178.5	--	--	2.4	--	--
TOP FARM	TFsx1097A	23.0	24	--	167.9	165	--	1.4	2	--
PAYCO	5133	23.1	--	--	125.4	--	--	1.0	--	--
FILLER		23.2	26	--	156.2	138	--	1.4	3	--
PIONEER	X1002U	23.3	--	--	158.9	--	--	0.5	--	--
TRELAY	5101	23.4	--	--	159.3	--	--	1.9	--	--
FILLER		23.4	--	--	167.2	--	--	1.0	--	--
*CALLAHAN	C7337	23.4	24	--	187.3	183	--	1.4	1	--
*PIONEER	3733	23.8	24	23	181.2	184	166	1.4	1	0
*GOLDEN HARVEST	H-2349	23.8	--	--	200.6	--	--	1.0	--	--

(continued below)

LATE TRIAL (103 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
ICI SEEDS	8700	24.4	24	--	171.5	173	--	0.0	6	--
PAYCO	6331	24.5	--	--	151.5	--	--	5.2	--	--
PAYCO	6431	24.5	--	--	173.6	--	--	1.4	--	--
PICKSEED	8855L	25.8	30	--	159.7	146	--	2.5	2	--
CROW'S	370	26.1	31	--	172.3	161	--	1.4	1	--
*PIONEER	3573	26.2	25	23	204.2	197	191	1.4	2	2
CIBA	4372	26.4	27	25	177.0	177	179	0.0	0	1
CROW'S	210	26.8	27	25	152.7	157	144	1.9	2	2
DAIRYLAND	STEALTH-1108	27.1	--	--	173.0	--	--	1.9	--	--
FILLER		27.2	27	25	194.5	177	167	1.0	3	2
NORTHROP KING	N5220	27.4	--	--	182.2	--	--	1.4	--	--
PIONEER	3515	27.6	31	--	192.7	160	--	1.9	3	--
TERRA	TR1050	27.6	27	--	175.1	169	--	2.4	2	--
TERRA	E1031	27.6	--	--	175.3	--	--	4.8	--	--
DYNA-GRO	5313 1 PRO	27.8	--	--	159.6	--	--	2.4	--	--
CROW'S	375	27.8	--	--	191.8	--	--	1.4	--	--
HYPERFORMER	HY9385	27.9	--	--	182.3	--	--	1.0	--	--
RENK	RK714	28.0	--	--	162.4	--	--	1.5	--	--
CARGILL	4327	28.1	31	28	197.0	179	154	0.5	1	1
STINE	1059	28.2	--	--	151.4	--	--	1.1	--	--
STINE	1073	28.3	--	--	179.2	--	--	1.0	--	--
PAYCO	7031	28.4	--	--	191.2	--	--	1.6	--	--
FILLER		28.4	--	--	175.5	--	--	1.5	--	--
TERRA	TR600E	28.5	--	--	176.7	--	--	0.5	--	--
CALLAHAN	C7245	28.5	27	--	179.2	182	--	1.0	1	--
*PIONEER	3525	28.7	31	--	199.8	175	--	0.5	0	--
AMCORN	PSX9009	28.7	29	26	180.7	173	170	0.0	2	2
DAIRYLAND	STEALTH-1208	29.1	--	--	177.0	--	--	2.9	--	--
TOP FARM	TFsx1107	29.2	32	28	182.3	174	175	2.4	1	2
PAYCO	711	29.2	28	25	193.0	189	188	0.0	2	2
DEKALB	DK554	29.9	31	--	183.5	171	--	0.0	2	--
DAIRYLAND	STEALTH-1205	30.0	33	--	191.9	174	--	1.0	1	--
TOP FARM	TFsx2104	30.0	--	--	166.8	--	--	3.9	--	--
CALLAHAN	C7249	30.2	32	28	188.6	164	165	1.0	1	1
PIONEER	3527	30.3	32	28	176.5	162	163	1.0	1	1
ASGROW	RX623	30.4	29	--	194.4	200	--	1.0	1	--
CALLAHAN	C7348	30.4	29	--	193.9	200	--	0.5	1	--
JACQUES	6970	30.6	32	--	177.1	166	--	0.0	1	--
GREAT LAKES	GL559	30.6	32	--	171.0	171	--	1.9	1	--
ICI SEEDS	N8562	30.7	--	--	173.2	--	--	1.0	--	--
RUPP	XR1635	30.9	--	--	188.6	--	--	0.0	--	--
CALLAHAN	C7446X	31.0	--	--	179.2	--	--	0.5	--	--
ICI SEEDS	8543	31.1	32	--	181.4	183	--	0.5	0	--
HYPERFORMER	HY9424	31.2	--	--	191.2	--	--	0.0	--	--
*CARGILL	SX269	31.6	35	30	202.8	173	175	0.5	1	1
GOLDEN HARVEST	H-2485	31.7	33	29	181.2	169	181	1.0	1	1
CIBA	4394	31.9	--	--	196.3	--	--	0.0	--	--
ANDERSONS	PSX345	32.0	31	27	175.9	176	170	1.4	2	2
*VIGORO	V1052	32.1	--	--	199.7	--	--	1.0	--	--
*CARGILL	X5307	32.1	--	--	201.4	--	--	1.4	--	--

(continued below)

EARLY TRIAL (102 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
BLANEY	405	24.0	23	21	157.3	161	143	1.0	1	1
FILLER		24.1	25	22	152.5	137	133	1.9	15	11
RUPP	Exp. 1-201	24.2	--	--	150.7	--	--	1.4	--	--
HYPERFORMER	HY9339	24.3	--	--	162.5	--	--	0.5	--	--
*FILLER		24.3	--	--	186.2	--	--	1.9	--	--
DEKALB	DK485	24.4	26	23	178.6	188	169	0.0	0	1
PIONEER	3723	24.4	24	22	168.9	169	150	0.5	1	1
*DEKALB	DK512	24.6	26	--	199.0	189	--	1.0	1	--
AMCORN	PSX5555	24.6	--	--	171.5	--	--	1.0	--	--
FILLER		25.1	26	--	175.6	140	--	3.3	10	--
PAYCO	648	25.1	25	22	153.5	153	150	7.4	4	4
GRIES	GSF-4100	25.2	25	--	165.4	162	--	2.9	1	--
RUPP	XR1644	25.8	26	--	175.2	186	--	1.0	1	--
PAYCO	633	26.3	--	--	172.2	--	--	0.5	--	--
GOLDEN HARVEST	H-2390	26.4	26	23	166.2	170	166	1.0	1	2
*CARGILL	4277	27.4	--	--	207.4	--	--	1.4	--	--
*GREAT LAKES	GL496	27.5	26	24	182.0	180	172	2.4	3	3
ASGROW	RX497	28.3	--	--	174.8	--	--	1.0	--	--
*MYCOGEN	5440	28.5	--	--	189.8	--	--	1.4	--	--
AMCORN	PSX5757	29.0	27	24	176.6	178	175	0.5	4	3
*ASGROW	RX510	29.2	--	--	182.9	--	--	0.0	--	--
GREAT LAKES	GL515	29.4	--	--	170.7	--	--	1.0	--	--
AVERAGE		23.1	24	22	167.7	165	154	2.1	4	4
RANGE		18.3	19	19	125.4	116	107	0.0	0	0
		29.4	27	24	207.4	189	175	10.5	33	24
LEAST SIGNIFICANT DIFFERENCE		1.4			13.5					
COEFFICIENT OF VARIANCE		8.4%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

**NO RELIABLE YIELD DATA, EXTENSIVE RACCOON DAMAGE

LATE TRIAL (103 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
PRO-SEED	PS3104	32.2	32	28	189.2	201	205	1.0	1	2
*AMCORN	PSX9292	32.2	35	30	200.9	182	200	1.0	1	1
CARGILL	5327	32.3	35	30	183.9	165	171	0.0	0	1
CARGILL	6227	32.5	38	33	189.3	158	176	1.5	1	1
PRO-SEED	Exp. 2810	32.7	--	--	171.1	--	--	2.0	--	--
RUPP	XR1808	33.0	34	--	187.9	176	--	1.4	1	--
FILLER		33.1	--	--	197.7	--	--	0.5	--	--
CALLAHAN	C7252	33.2	34	30	195.6	178	186	0.5	0	1
STINE	1080	33.7	--	--	183.7	--	--	1.0	--	--
*PIONEER	3394	33.9	34	30	198.9	182	181	0.0	0	0
FILLER		34.0	--	--	187.3	--	--	1.9	--	--
PIONEER	X1082P	34.0	--	--	190.3	--	--	0.5	--	--
MYCOGEN	6220	34.3	--	--	195.5	--	--	0.5	--	--
DAIRYLAND	DX-1110	34.3	--	--	196.6	--	--	0.0	--	--
*CROW'S	445	34.4	--	--	200.1	--	--	1.9	--	--
RENK	RK812	34.7	36	--	193.9	170	--	1.0	1	--
*RUPP	XR1677	35.0	35	--	211.6	193	--	1.9	1	--
VIGORO	V1032	35.3	--	--	174.5	--	--	1.4	--	--
*CARGILL	6677	36.3	--	--	203.2	--	--	0.0	--	--
HYPERFORMER	HY9487	36.9	--	--	182.8	--	--	1.0	--	--
CROW'S	401	37.7	37	--	179.5	164	--	0.5	0	--
CROW'S	494	38.0	--	--	187.5	--	--	0.5	--	--
AVERAGE		30.5	31	28	184.0	175	176	1.2	1	1
RANGE		24.4	24	23	151.4	146	144	0.0	0	0
		38.0	38	33	211.6	201	205	5.2	6	2
LEAST SIGNIFICANT DIFFERENCE		2.0			14.3					
COEFFICIENT OF VARIANCE		8.1%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

1993
PLANTED May 8
HARVESTED October 15
SOIL TYPE Capac Loam
PREVIOUS CROP Soybeans
POPULATION 27,400
ROW WIDTH 30"
FERTILIZER 168-28-28
SOIL TEST: pH 6.4
P 104 (very high)
K 160 (medium)

1992
May 4
October 31
Capac Loam
Soybeans
23,900
30"
148-38-68
6.4
113 (very high)
227 (high)

1991
May 5
October 7
Capac Loam
Soybeans
25,400
30"
165-50-50
6.8
54 (medium)
133 (low)

FARM COOPERATOR: Michigan State University, East Lansing
COUNTY EXTENSION DIRECTOR: Joseph Lessard, Mason
EXTENSION AGRICULTURAL AGENTS: John Knorek and Laura Rhodes, Mason

TABLE 7

SOUTH CENTRAL MICHIGAN

ZONE 2

SAGINAW COUNTY TRIAL
ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

EARLY TRIAL (102 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))											
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING			
		1993	YR	YR	1993	YR	YR	1993	YR	YR	
PIONEER	3861	18.5	--	--	173.0	--	--	2.4	--	--	
NORTHUP KING	N2933	19.5	--	--	152.5	--	--	3.8	--	--	
PAYCO	4211	19.6	--	--	170.0	--	--	2.0	--	--	
CALLAHAN	C7425X	19.6	--	--	157.4	--	--	3.9	--	--	
*DEKALB	DK485	20.1	22	21	181.7	170	166	1.5	1	1	
RENK	RK617	20.1	22	--	169.8	154	--	1.4	2	--	
*NORTHUP KING	N2879	20.7	--	--	176.9	--	--	1.5	--	--	
*PIONEER	3751	20.8	22	21	177.3	164	169	1.0	1	1	
*DAIRYLAND	STEALTH-1198	20.9	21	21	182.3	169	165	0.5	2	2	
PAYCO	413	20.9	--	--	161.2	--	--	0.5	--	--	
TRELA	5200	21.0	22	--	175.0	164	--	1.0	2	--	
CALLAHAN	C7337	21.0	24	--	171.4	152	--	3.6	3	--	
*BLANEY	2100	21.1	--	--	176.7	--	--	0.5	--	--	
DEKALB	DK471	21.2	--	--	175.6	--	--	2.9	--	--	
*PIONEER	3723	21.2	23	21	179.2	167	167	3.7	2	2	
*PIONEER	X1002U	21.3	--	--	182.1	--	--	0.0	--	--	
PAYCO	5131	21.3	--	--	152.4	--	--	2.8	--	--	
BLANEY	2070	21.4	--	--	151.0	--	--	9.0	--	--	
*STINE	993	21.5	--	--	177.3	--	--	0.0	--	--	
GREAT LAKES	GL471	21.7	--	--	169.9	--	--	2.4	--	--	
NORTHUP KING	N4242	21.7	22	20	168.3	160	163	1.0	1	1	
*PIONEER	3733	21.7	24	22	181.8	163	172	4.0	2	1	
PAYCO	5132	21.7	--	--	154.6	--	--	5.4	--	--	
*PAYCO	5331	21.7	--	--	182.6	--	--	0.5	--	--	
*AGRIGENE	AG3965	21.8	--	--	178.6	--	--	0.0	--	--	
*CALLAHAN	C7435X	21.8	--	--	179.1	--	--	1.2	--	--	
*PAYCO	4421	21.9	--	--	176.2	--	--	3.2	--	--	
PAYCO	5133	21.9	--	--	150.7	--	--	2.0	--	--	
HYPERFORMER	HS9330	22.0	23	--	150.1	150	--	1.9	2	--	
PAYCO	531	22.0	23	--	173.5	160	--	1.1	1	--	
*FILLER	GSF-2393	22.1	21	--	179.2	167	--	2.0	1	--	
GRIES	H-2331	22.2	21	--	160.1	148	--	1.0	1	--	
*GOLDEN HARVEST	GL450	22.3	23	22	177.2	168	167	0.0	1	2	
GREAT LAKES	GL450	22.4	24	23	175.6	155	153	0.5	1	1	
HYPERFORMER	HY9334	22.5	--	--	151.1	--	--	7.5	--	--	
FILLER		22.5	--	--	146.7	--	--	2.2	--	--	
FILLER		22.5	--	--	175.2	--	--	2.0	--	--	
CALLAHAN	C7434X	22.5	--	--	159.2	--	--	4.5	--	--	
CIBA	4282	22.6	25	23	166.2	142	151	0.0	0	1	
CARGILL	3427	22.8	24	22	160.2	149	147	1.0	1	1	
CARGILL	3777	22.8	--	--	164.1	--	--	3.8	--	--	
*PIONEER	3769	22.9	--	--	179.7	--	--	0.0	--	--	
BLANEY	405	23.1	24	23	169.2	158	152	3.7	2	2	
CIBA	4273	23.1	--	--	167.0	--	--	3.5	--	--	
*DEKALB	DK493	23.3	--	--	177.2	--	--	1.5	--	--	
TOP FARM	TFsx1097A	23.3	23	--	150.9	150	--	3.0	3	--	
*GOLDEN HARVEST	H-2349	23.3	--	--	179.1	--	--	0.0	--	--	
*DEKALB	DK512	23.5	25	--	177.9	167	--	0.5	1	--	
CALLAHAN	C7339	23.6	--	--	165.3	--	--	0.5	--	--	
AMCORN	PSX4747	23.7	--	--	165.9	--	--	1.4	--	--	

(continued below)

LATE TRIAL (103 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))											
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING			
		1993	YR	YR	1993	YR	YR	1993	YR	YR	
ICI SEEDS	8700	21.8	23	--	161.9	151	--	5.8	3	--	
DAIRYLAND	STEALTH-1108	22.6	--	--	153.7	--	--	4.6	--	--	
*PIONEER	3573	22.8	26	24	183.2	177	179	3.4	2	1	
HYPERFORMER	HY9385	23.4	--	--	161.5	--	--	1.5	--	--	
TOP FARM	TFsx2104	23.5	--	--	150.2	--	--	2.5	--	--	
TERRA	E1031	23.8	--	--	142.0	--	--	7.2	--	--	
CROW'S	370	23.9	28	--	173.9	157	--	1.4	2	--	
PAYCO	6431	23.9	--	--	171.7	--	--	2.5	--	--	
*DEKALB	DK554	24.1	27	--	178.5	175	--	5.0	3	--	
PAYCO	6331	24.4	--	--	142.7	--	--	6.3	--	--	
RUPP	XR1635	24.7	--	--	177.2	--	--	0.0	--	--	
*PIONEER	3527	25.0	27	26	192.9	171	177	0.0	0	0	
*CIBA	4372	25.1	26	26	194.9	171	170	0.5	1	1	
PIONEER	3525	25.3	26	--	174.0	167	--	4.2	2	--	
GREAT LAKES	GL559	25.4	28	--	166.4	160	--	2.0	2	--	
TERRA	TR1050	25.4	26	--	165.9	155	--	1.5	1	--	
STINE	1073	25.4	--	--	163.2	--	--	1.1	--	--	
*PAYCO	7031	25.4	--	--	189.0	--	--	0.6	--	--	
DYNA-GRO	5313 I PRO	25.5	--	--	150.1	--	--	3.0	--	--	
CROW'S	375	25.5	--	--	161.9	--	--	2.9	--	--	
FILLER		25.6	27	25	170.7	154	161	0.5	0	0	
PIONEER	X1082P	26.0	--	--	173.1	--	--	5.6	--	--	
PICKSEED	8855L	26.0	28	--	174.6	162	--	3.0	2	--	
CALLAHAN	C7245	26.1	26	--	158.9	149	--	2.1	2	--	
RENK	RK714	26.2	--	--	177.1	--	--	0.5	--	--	
TOP FARM	TFsx1107	26.2	28	26	164.5	162	163	1.5	1	1	
*CARGILL	4327	26.4	29	26	184.6	169	174	1.0	1	1	
CARGILL	X5307	26.4	--	--	175.2	--	--	2.7	--	--	
*FILLER		26.4	--	--	191.6	--	--	2.0	--	--	
NORTHUP KING	N5220	26.5	--	--	165.4	--	--	1.0	--	--	
*CALLAHAN	C7446X	26.5	--	--	181.7	--	--	2.6	--	--	
MYCOGEN	6220	26.7	--	--	163.6	--	--	0.5	--	--	
*DAIRYLAND	STEALTH-1208	26.8	--	--	180.1	--	--	0.5	--	--	
PAYCO	711	26.8	28	25	169.2	166	163	0.5	1	1	
HYPERFORMER	HY9424	26.9	--	--	177.9	--	--	0.0	--	--	
DAIRYLAND	STEALTH-1205	26.9	30	--	155.2	151	--	1.0	1	--	
CROW'S	210	26.9	27	25	162.8	153	155	2.5	2	1	
CALLAHAN	C7249	26.9	29	26	169.9	167	166	1.5	2	1	
STINE	1059	27.1	--	--	152.3	--	--	1.2	--	--	
CALLAHAN	C7348	27.1	28	--	173.3	159	--	1.5	1	--	
STINE	1080	27.3	--	--	158.3	--	--	4.2	--	--	
ASGROW	RX623	27.4	28	--	177.2	162	--	4.9	3	--	
PIONEER	3515	27.5	29	--	162.2	165	--	5.1	3	--	
*CIBA	4394	27.7	--	--	186.7	--	--	0.0	--	--	
*JACQUES	6970	28.0	30	--	190.4	176	--	0.5	1	--	
AMCORN	PSX9009	28.0	30	28	156.7	152	154	4.9	3	3	
TERRA	TR600E	28.2	--	--	176.8	--	--	2.2	--	--	
VIGORO	V1052	28.3	--	--	152.1	--	--	6.0	--	--	
CARGILL	SK269	28.4	30	28	172.9	165	171	3.0	2	2	
CARGILL	5327	28.4	30	27	168.0	161	157	1.5	1	1	

(continued below)

EARLY TRIAL (102 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	YR	YR	1993	YR	YR	1993	YR	YR
GUTWEIN 2120	23.9	24	--	157.9	150	--	2.0	1	--
GRIES GSF-4100	24.1	25	--	147.3	145	--	0.0	0	--
ASGROW RX497	24.1	--	--	171.5	--	--	2.1	--	--
RUPP Exp. 1-201	24.2	--	--	161.7	--	--	0.5	--	--
AMCORN PSX5555	24.3	--	--	165.5	--	--	0.5	--	--
NORTHUP KING N3808	24.4	24	21	157.8	150	159	1.0	1	1
PAYCO 648	24.4	24	23	167.9	162	166	0.5	1	1
FILLER	24.5	26	--	164.2	155	--	2.0	2	--
FILLER	24.8	25	--	149.0	144	--	1.0	1	--
HYPERFORMER HY9339	25.1	--	--	171.4	--	--	0.5	--	--
GREAT LAKES GL496	25.2	25	23	165.9	154	155	0.5	1	1
CALLAHAN C729	25.2	23	--	155.7	143	--	1.0	1	--
GOLDEN HARVEST H-2390	25.3	26	24	170.1	152	152	1.4	2	2
PAYCO 633	25.9	--	--	175.3	--	--	1.0	--	--
*CARGILL 4277	26.1	--	--	192.0	--	--	0.5	--	--
RUPP XR1644	26.5	28	--	165.4	152	--	0.0	0	--
AMCORN PSX5757	26.5	26	25	158.2	151	153	0.5	1	1
TRELLAY 5101	26.7	--	--	161.7	--	--	3.4	--	--
FILLER	26.8	26	23	155.9	150	155	1.4	3	2
*ASGROW RX510	27.1	--	--	186.5	--	--	0.0	--	--
GREAT LAKES GL515	27.6	--	--	172.8	--	--	1.0	--	--
MYCOGEN 5440	28.5	--	--	161.0	--	--	4.3	--	--
AVERAGE	22.9	24	22	168.0	156	159	1.8	1	1
RANGE	18.5	21	20	146.7	142	147	0.0	0	1
	28.5	28	25	192.0	170	172	9.0	3	2
LEAST SIGNIFICANT DIFFERENCE	1.4			7.8					
COEFFICIENT OF VARIANCE	4.8%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

LATE TRIAL (103 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	YR	YR	1993	YR	YR	1993	YR	YR
ICI SEEDS N8562	28.5	--	--	157.2	--	--	0.5	--	--
*RUPP XR1677	28.5	30	--	190.7	166	--	1.5	1	--
PIONEER 3394	28.6	31	28	175.3	160	168	3.3	2	1
PRO-SEED Exp. 2810	28.7	--	--	173.4	--	--	1.4	--	--
GOLDEN HARVEST H-2485	28.8	30	29	158.5	151	151	0.5	2	2
CALLAHAN C7252	28.8	32	30	177.0	159	166	1.0	1	1
ANDERSONS PSX345	28.9	29	27	154.4	152	158	6.6	3	3
*HYPERFORMER HY9487	29.2	--	--	186.8	--	--	0.0	--	--
*CARGILL 6677	29.2	--	--	181.0	--	--	1.6	--	--
*CROW'S 401	29.3	32	--	179.5	160	--	2.0	1	--
CROW'S 445	29.4	--	--	174.2	--	--	2.0	--	--
*RENN RK812	29.8	31	--	185.9	167	--	1.5	1	--
RUPP XR1808	29.9	31	--	169.1	157	--	0.5	1	--
ICI SEEDS 8543	30.3	31	--	165.7	161	--	1.7	1	--
AMCORN PSX104	30.4	29	28	161.2	162	167	2.5	2	1
CARGILL 6227	30.7	31	30	160.8	160	164	6.4	3	2
FILLER	30.9	--	--	176.6	--	--	2.5	--	--
DAIRYLAND DX-1110	31.0	--	--	159.1	--	--	1.0	--	--
CROW'S 494	31.3	--	--	174.4	--	--	0.5	--	--
AMCORN PSX9292	31.6	32	30	157.7	155	163	3.4	3	2
FILLER	31.7	--	--	157.9	--	--	2.1	--	--
VIGORO V1032	32.9	--	--	156.2	--	--	1.1	--	--
AVERAGE	27.2	29	27	169.6	161	164	2.3	2	1
RANGE	21.8	23	24	142.0	149	151	0.0	0	0
	32.9	32	30	194.9	177	179	7.2	3	3
LEAST SIGNIFICANT DIFFERENCE	1.2			8.7					
COEFFICIENT OF VARIANCE	5.3%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

1993
PLANTED May 9
HARVESTED October 22
SOIL TYPE Charity Clay
PREVIOUS CROP Dry Beans
POPULATION 26,050
ROW WIDTH 30"
FERTILIZER 138-0-0
SOIL TEST: pH 7.9
P 128 (very high)
K 472 (very high)

1992
PLANTED May 7
HARVESTED November 15
SOIL TYPE Charity Clay
PREVIOUS CROP Dry Beans
POPULATION 24,600
ROW WIDTH 30"
FERTILIZER 184-0-0
SOIL TEST: pH 7.3
P 107 (very high)
K 508 (very high)

1991
PLANTED May 14
HARVESTED October 17
SOIL TYPE Charity Clay
PREVIOUS CROP Dry Beans
POPULATION 24,000
ROW WIDTH 30"
FERTILIZER 150-0-0
SOIL TEST: pH 7.2
P 77 (high)
K 336 (very high)

FARM COOPERATOR: Paul Horny, Saginaw Beet & Bean Research Farm, Saginaw
COUNTY EXTENSION DIRECTOR: James Thews, Saginaw
EXTENSION AGRICULTURAL AGENT: Steven Poindexter, Saginaw

TABLE 8

SOUTH CENTRAL MICHIGAN

ZONE 2

AVERAGE OF KENT, INGHAM & SAGINAW COUNTY TRIALS
ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

EARLY TRIAL (102 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))												
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING			1993	YR
		1993	2	3	1993	2	3	1993	2	3		
PIONEER	3861	18.7	--	--	171.1	--	--	2.4	--	--		
NORTHROP KING	N2933	19.3	--	--	150.2	--	--	3.6	--	--		
NORTHROP KING	N2879	19.5	--	--	**172.9	--	--	6.4	--	--		
PAYCO	4211	19.8	--	--	165.3	--	--	6.3	--	--		
BLANEY	2070	20.3	--	--	165.3	--	--	9.7	--	--		
CALLAHAN	C7425X	20.3	--	--	162.8	--	--	3.5	--	--		
PAYCO	413	20.5	--	--	166.9	--	--	2.0	--	--		
*DEKALB	DK471	20.6	--	--	184.6	--	--	2.6	--	--		
*STINE	993	20.8	--	--	182.8	--	--	1.8	--	--		
RENK	RK617	20.9	22	--	173.6	173	--	2.1	3	--		
*GOLDEN HARVEST	H-2331	20.9	22	21	180.7	181	175	1.4	2	3		
*PAYCO	531	21.0	22	--	179.8	178	--	3.9	3	--		
GRIES	GSF-239J	21.1	21	--	155.9	152	--	2.0	1	--		
*NORTHROP KING	N4242	21.1	22	20	178.1	171	167	1.3	3	2		
PAYCO	5131	21.1	--	--	164.8	--	--	3.4	--	--		
*TRELAY	5200	21.2	22	--	188.3	181	--	3.7	4	--		
*DAIRYLAND	STEALTH-1198	21.2	22	21	183.6	179	175	5.3	5	4		
*BLANEY	2100	21.5	--	--	188.4	--	--	1.3	--	--		
GREAT LAKES	GL450	21.5	23	21	175.2	173	176	2.5	2	2		
*AGRIGENE	AG3965	21.5	--	--	180.9	--	--	1.5	--	--		
PIONEER	3751	21.7	23	21	175.1	165	164	1.0	4	3		
CARGILL	3777	21.8	--	--	173.2	--	--	2.4	--	--		
PAYCO	5132	21.8	--	--	161.7	--	--	3.2	--	--		
*CALLAHAN	C7337	21.8	23	--	183.6	176	--	3.8	3	--		
*DEKALB	DK493	21.9	--	--	181.6	--	--	0.8	--	--		
HYPERFORMER	HS9330	21.9	23	--	158.4	158	--	2.2	2	--		
HYPERFORMER	HY9334	21.9	--	--	168.9	--	--	6.4	--	--		
PIONEER	3769	21.9	--	--	176.9	--	--	0.6	--	--		
PAYCO	5133	22.0	--	--	149.6	--	--	2.1	--	--		
*PIONEER	3723	22.1	23	21	182.6	176	174	1.6	2	1		
FILLER		22.2	20	--	165.7	151	--	2.3	2	--		
*PIONEER	X1002U	22.2	--	--	180.5	--	--	0.8	--	--		
*CALLAHAN	C7435X	22.2	--	--	183.7	--	--	2.2	--	--		
PAYCO	4421	22.3	--	--	172.9	--	--	2.3	--	--		
*PAYCO	5331	22.3	--	--	185.4	--	--	1.4	--	--		
CALLAHAN	C729	22.3	22	--	149.7	142	--	2.7	4	--		
CALLAHAN	C7434X	22.3	--	--	159.3	--	--	2.5	--	--		
CIBA	4273	22.4	--	--	175.6	--	--	2.0	--	--		
CALLAHAN	C7339	22.5	--	--	162.6	--	--	1.9	--	--		
*CIBA	4282	22.6	23	21	180.1	167	170	1.0	1	1		
GREAT LAKES	GL471	22.6	--	--	158.9	--	--	3.0	--	--		
NORTHROP KING	N3808	22.6	22	20	159.5	153	158	2.1	5	4		
CARGILL	3427	22.6	24	22	156.8	145	145	5.1	12	9		
AMCORN	PSX4747	22.6	--	--	162.1	--	--	1.0	--	--		
*DEKALB	DK485	22.7	24	22	184.5	181	178	1.1	1	1		
TOP FARM	TFsx1097A	22.8	23	--	160.4	158	--	1.8	2	--		
BLANEY	405	23.0	23	22	164.5	164	158	2.0	2	1		
*PIONEER	3733	23.0	24	22	181.9	176	174	2.3	1	1		
FILLER		23.0	--	--	158.0	--	--	1.4	--	--		
GUTWEIN	2120	23.1	23	--	162.4	160	--	1.6	1	--		

(continued below)

LATE TRIAL (103 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))												
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING			1993	YR
		1993	2	3	1993	2	3	1993	2	3		
ICI SEEDS	8700	23.3	23	--	165.6	165	--	5.3	5	--		
*PIONEER	3573	24.4	25	23	196.8	192	192	2.4	2	2		
PAYCO	6431	24.9	--	--	171.6	--	--	2.9	--	--		
CROW'S	370	25.1	29	--	168.7	161	--	2.0	3	--		
PAYCO	6331	25.6	--	--	153.8	--	--	5.6	--	--		
CIBA	4372	25.9	27	25	181.9	177	180	1.4	1	2		
DAIRYLAND	STEALTH-1108	26.0	--	--	168.2	--	--	3.0	--	--		
TERRA	E1031	26.2	--	--	163.8	--	--	7.3	--	--		
FILLER		26.3	27	25	182.3	170	170	1.5	1	1		
STINE	1073	26.5	--	--	172.1	--	--	1.7	--	--		
PICKSEED	8855L	26.5	29	--	161.4	159	--	3.4	3	--		
HYPERFORMER	HY9385	26.6	--	--	174.4	--	--	1.3	--	--		
RENK	RK714	26.7	--	--	161.2	--	--	1.2	--	--		
DYNA-GRO	5313 I PRO	26.8	--	--	155.9	--	--	2.8	--	--		
*DEKALB	DK554	26.9	29	--	185.2	179	--	3.9	3	--		
CROW'S	210	26.9	26	25	160.9	160	158	2.6	2	2		
TERRA	TR1050	27.1	27	--	166.5	163	--	4.8	3	--		
*CARGILL	4327	27.1	30	27	187.0	178	173	1.3	1	2		
CROW'S	375	27.2	--	--	177.1	--	--	2.1	--	--		
NORTHROP KING	N5220	27.3	--	--	167.2	--	--	1.6	--	--		
*PIONEER	3525	27.3	29	--	193.2	182	--	1.9	1	--		
TOP FARM	TFsx2104	27.3	--	--	162.6	--	--	2.8	--	--		
FILLER		27.3	--	--	177.0	--	--	1.5	--	--		
*PIONEER	3527	27.6	29	26	188.3	178	183	0.3	0	1		
STINE	1059	27.6	--	--	152.2	--	--	1.1	--	--		
GREAT LAKES	GL559	27.7	30	--	170.4	170	--	3.1	2	--		
*RUPP	XR1635	27.7	--	--	184.1	--	--	0.3	--	--		
CALLAHAN	C7245	27.8	27	--	161.3	160	--	3.4	3	--		
CALLAHAN	C7446X	27.8	--	--	177.6	--	--	1.7	--	--		
TOP FARM	TFsx1107	27.9	30	27	170.9	172	174	2.1	1	1		
AMCORN	PSX9009	27.9	29	27	166.6	167	169	2.8	2	2		
CALLAHAN	C7348	27.9	28	--	182.5	181	--	1.0	1	--		
DAIRYLAND	STEALTH-1208	28.1	--	--	170.2	--	--	1.6	--	--		
PIONEER	3515	28.2	30	--	180.4	173	--	2.3	2	--		
DAIRYLAND	STEALTH-1205	28.2	31	--	175.4	171	--	1.5	1	--		
*PAYCO	7031	28.2	--	--	189.1	--	--	0.7	--	--		
HYPERFORMER	HY9424	28.7	--	--	182.4	--	--	0.5	--	--		
TERRA	TR600E	28.7	--	--	176.3	--	--	0.9	--	--		
PAYCO	711	28.8	28	26	180.5	180	182	0.2	1	1		
*ASGROW	RX623	28.9	28	--	185.7	184	--	2.6	2	--		
JACQUES	6970	29.1	31	--	181.9	174	--	0.6	1	--		
*CARGILL	X5307	29.1	--	--	196.1	--	--	1.4	--	--		
CALLAHAN	C7249	29.1	31	27	172.2	167	171	1.0	1	1		
GOLDEN HARVEST	H-2485	29.2	31	28	171.3	164	170	3.8	4	3		
*PIONEER	X1082P	29.8	--	--	187.6	--	--	2.0	--	--		
ICI SEEDS	N8562	29.8	--	--	162.9	--	--	1.9	--	--		
*CIBA	4394	29.9	--	--	188.0	--	--	0.0	--	--		
VIGORO	V1052	29.9	--	--	177.3	--	--	2.5	--	--		
*CARGILL	SX269	30.0	32	29	187.0	174	183	1.5	1	2		
ICI SEEDS	8543	30.0	31	--	181.4	177	--	2.5	1	--		

(continued below)

EARLY TRIAL (102 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
	1993	YR	YR	1993	YR	YR	1993	YR	YR
*FILLER	23.1	--	--	187.0	--	--	1.5	--	--
FILLER	23.4	24	--	156.1	149	--	1.1	2	--
GRIES	23.7	25	--	160.0	158	--	1.8	1	--
*GOLDEN HARVEST	23.7	--	--	187.2	--	--	0.7	--	--
*DEKALB	23.8	26	--	192.6	184	--	0.5	1	--
RUPP	23.9	--	--	158.7	--	--	1.4	--	--
HYPERFORMER	24.0	--	--	166.9	--	--	0.7	--	--
FILLER	24.0	26	--	173.9	158	--	2.7	5	--
TRELAY	24.2	--	--	164.7	--	--	1.8	--	--
AMCORN	24.3	--	--	169.3	--	--	1.0	--	--
FILLER	24.9	25	22	160.0	155	158	1.7	7	5
PAYCO	25.0	25	23	162.4	162	165	2.8	2	2
PAYCO	25.0	--	--	170.4	--	--	1.1	--	--
ASGROW	25.2	--	--	173.3	--	--	2.1	--	--
GOLDEN HARVEST	25.2	25	23	174.3	167	171	1.9	2	2
RUPP	25.5	27	--	171.8	172	--	0.5	0	--
GREAT LAKES	25.8	25	23	172.5	168	169	1.8	2	2
*CARGILL	27.1	--	--	198.0	--	--	1.0	--	--
AMCORN	27.1	26	24	165.7	164	169	0.8	3	3
GREAT LAKES	27.3	--	--	177.0	--	--	1.1	--	--
*ASGROW	27.6	--	--	194.5	--	--	0.2	--	--
*MYCOGEN	29.4	--	--	181.4	--	--	2.1	--	--
AVERAGE	22.7	23	22	171.7	166	167	2.2	3	3
RANGE	18.7	20	20	149.6	142	145	0.2	0	1
	29.4	27	24	198.0	184	178	9.7	12	9
LEAST SIGNIFICANT DIFFERENCE	.8			6.4					
COEFFICIENT OF VARIANCE	6.8%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

**AVERAGE DOES NOT INCLUDE INGHAM'S ZERO DATA

LATE TRIAL (103 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
	1993	YR	YR	1993	YR	YR	1993	YR	YR
STINE	30.2	--	--	173.6	--	--	2.2	--	--
ANDERSONS	30.2	30	27	162.3	165	169	5.4	3	3
CARGILL	30.5	32	28	171.6	168	172	1.3	1	2
PRO-SEED	30.6	31	28	175.1	180	188	3.7	2	2
PRO-SEED	30.6	--	--	176.5	--	--	1.6	--	--
CARGILL	30.8	33	30	177.1	169	177	3.4	2	2
*CALLAHAN	30.8	33	29	189.4	176	184	0.8	1	1
MYCOGEN	31.2	--	--	181.7	--	--	0.5	--	--
*RUPP	31.2	32	--	200.0	184	--	1.5	1	--
*RUPP	31.2	33	--	183.7	175	--	1.1	1	--
*PIONEER	31.5	33	29	188.7	177	186	1.1	1	1
AMCORN	31.6	33	30	175.0	170	182	3.2	2	2
CROW'S	31.8	--	--	179.3	--	--	1.8	--	--
*RENK	32.0	33	--	184.0	174	--	1.5	1	--
*FILLER	32.2	--	--	185.4	--	--	1.5	--	--
FILLER	32.3	--	--	171.1	--	--	3.7	--	--
DAIRYLAND	32.3	--	--	177.6	--	--	1.1	--	--
VIGORO	32.8	--	--	165.2	--	--	1.2	--	--
*CARGILL	33.2	--	--	190.1	--	--	0.9	--	--
*HYPERFORMER	33.4	--	--	184.2	--	--	1.0	--	--
CROW'S	34.3	--	--	176.5	--	--	0.8	--	--
CROW'S	35.1	35	--	172.1	167	--	1.8	1	--
AVERAGE	28.9	30	27	176.3	172	177	2.1	2	2
RANGE	23.3	23	23	152.2	159	158	0.0	0	1
	35.1	35	30	200.0	192	192	7.3	5	3
LEAST SIGNIFICANT DIFFERENCE	1.0			7.1					
COEFFICIENT OF VARIANCE	7.4%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

TABLE 9

NORTH CENTRAL MICHIGAN

ZONE 3

 HURON COUNTY TRIAL - GRAIN
 ONE, TWO, THREE YEAR AVERAGES - 1993, 1992, 1991

EARLY TRIAL (98 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
PAYCO	3131	18.5	--	--	144.5	--	--	1.5	--	--
*CARGILL	2927	19.5	25	23	165.0	155	168	0.5	2	2
ANDERSONS	HSX2241	19.6	--	--	137.3	--	--	1.0	--	--
PAYCO	248	20.0	--	--	140.2	--	--	4.3	--	--
PAYCO	402	20.2	--	--	146.9	--	--	0.5	--	--
PAYCO	253	20.3	--	--	156.6	--	--	2.9	--	--
PAYCO	413	20.3	--	--	152.4	--	--	3.0	--	--
STINF	92-23X	20.5	--	--	154.8	--	--	2.0	--	--
*DEKALB	DK381	20.7	23	--	173.8	164	--	0.0	1	--
DAIRYLAND	STEALTH-1294	20.9	--	--	145.9	--	--	0.5	--	--
*PAYCO	4211	20.9	--	--	169.6	--	--	0.5	--	--
DEKALB	DK401	21.0	25	22	149.1	138	157	0.0	0	0
TOP FARM	TFsx1193	21.0	--	--	151.2	--	--	0.0	--	--
PAYCO	2432	21.0	--	--	148.6	--	--	1.9	--	--
CIBA	4070	21.1	23	--	141.1	134	--	0.5	1	--
CIBA	4172	21.1	--	--	140.8	--	--	0.0	--	--
*NORTHROP KING	N2409	21.1	--	--	164.4	--	--	0.5	--	--
AMCORN	PSX3333	21.2	25	23	146.2	140	158	0.5	2	2
ANDERSONS	HSX44011	21.3	--	--	148.5	--	--	0.0	--	--
FILLER		21.3	--	--	149.9	--	--	2.7	--	--
FILLER		21.5	--	--	153.0	--	--	0.0	--	--
PIONEER	3861	21.7	25	--	159.8	152	--	3.8	2	--
NORTHROP KING	N2933	21.8	--	--	148.0	--	--	0.0	--	--
PAYCO	4421	21.8	--	--	152.4	--	--	1.0	--	--
TERRA	TR910	21.9	24	--	152.4	140	--	0.5	1	--
*CALLAHAN	C7435X	21.9	--	--	164.3	--	--	0.0	--	--
FILLER		22.0	--	--	145.8	--	--	0.5	--	--
PIONEER	3921	22.2	24	--	148.6	150	--	0.0	0	--
CALLAHAN	C725	22.2	26	23	148.1	143	162	1.4	1	1
*BLANEY	2070	22.5	--	--	168.8	--	--	2.9	--	--
PIONEER	3876	22.6	--	--	146.9	--	--	0.0	--	--
FILLER		22.7	--	--	143.1	--	--	0.0	--	--
NORTHROP KING	N2879	22.8	--	--	145.3	--	--	0.5	--	--
CIBA	4120	22.9	26	23	141.6	134	158	0.0	0	1
GRIES	GSF-2393	22.9	--	--	156.7	--	--	0.5	--	--
CALLAHAN	C729	22.9	26	24	135.3	123	137	0.5	1	1
ASGROW	RX433	23.2	--	--	156.2	--	--	1.0	--	--
TOP FARM	TFsx2195	23.3	--	--	158.5	--	--	0.5	--	--
PICKSEED	5665	23.3	29	25	145.8	139	148	1.0	1	0
CALLAHAN	C7434X	23.4	--	--	148.4	--	--	2.9	--	--
CARGILL	3427	23.5	30	26	162.6	146	166	0.5	1	1
*DEKALB	DK471	23.6	--	--	168.7	--	--	0.0	--	--
JACQUES	4770	23.6	30	27	149.4	143	167	0.5	1	1
PAYCO	5132	23.6	--	--	159.0	--	--	0.0	--	--
JACQUES	4440	23.7	29	--	156.6	158	--	0.0	1	--
*PIONEER	3769	23.8	--	--	179.9	--	--	0.0	--	--
PIONEER	3751	23.8	30	26	156.0	154	173	0.0	0	1
TOP FARM	TFsx1097A	24.0	29	25	149.5	142	155	3.4	2	2
CALLAHAN	C7425X	24.2	--	--	154.4	--	--	0.5	--	--
GOLDEN HARVEST	H-2349	24.3	--	--	152.8	--	--	1.0	--	--

(continued below)

LATE TRIAL (99 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))										
		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
HYBRID (BRAND-VARIETY)		1993	YR	YR	1993	YR	YR	1993	YR	YR
AGRIGENE	AG3965	21.9	--	--	158.2	--	--	0.5	--	--
DEKALB	DK493	22.7	--	--	169.9	--	--	2.9	--	--
CALLAHAN	C7339	23.7	--	--	167.2	--	--	0.5	--	--
PIONEER	3723	23.8	29	25	162.9	157	171	0.0	0	0
CIBA	4273	24.0	--	--	154.5	--	--	0.5	--	--
NORTHROP KING	N4242	24.0	30	--	160.1	153	--	0.5	1	--
ICI SEEDS	8777	24.1	30	--	148.4	147	--	1.4	1	--
NORTHROP KING	N3808	24.2	29	25	166.1	157	169	1.4	2	2
TOP FARM	TFsx2102	24.3	--	--	149.5	--	--	0.5	--	--
DAIRYLAND	STEALTH-1202	24.5	28	--	138.6	142	--	1.4	1	--
ICI SEEDS	8700	24.6	30	--	150.3	145	--	1.0	1	--
STINE	993	24.6	--	--	165.5	--	--	0.5	--	--
JUNG	2648	24.6	28	--	163.3	154	--	3.8	2	--
*PIONEER	3733	25.0	30	27	174.8	164	170	1.4	1	1
RENK	RK617	25.1	30	--	166.6	151	--	1.0	2	--
JUNG	2596	25.1	--	--	158.2	--	--	1.0	--	--
DAIRYLAND	DX-1100	25.3	31	27	153.9	154	165	2.4	3	3
CARGILL	3777	25.5	--	--	163.2	--	--	1.0	--	--
FILLER		25.6	--	--	153.5	--	--	0.5	--	--
DEKALB	DK512	25.7	32	--	161.0	162	--	0.5	2	--
RENK	RK657	25.7	30	--	144.1	142	--	1.0	1	--
BLANEY	405	26.1	31	27	153.7	155	162	1.0	1	2
PICKSEED	5993	26.1	29	--	160.7	161	--	0.0	1	--
DAIRYLAND	STEALTH-1203	26.2	32	--	158.9	151	--	1.0	1	--
GOLDEN HARVEST	H-2390	26.4	31	28	153.6	143	154	1.9	1	1
ICI SEEDS	SC1999	26.7	23	--	151.9	174	--	1.9	1	--
CROW'S	370	26.8	34	--	150.9	147	--	2.4	3	--
DAIRYLAND	STEALTH-1108	27.0	--	--	154.1	--	--	0.5	--	--
RUPP	XR1623	27.0	--	--	165.7	--	--	0.0	--	--
GRIES	GSP-4100	27.6	--	--	162.0	--	--	0.0	--	--
RENK	RK602	27.6	30	27	126.7	139	147	1.4	1	1
GREAT LAKES	GL496	27.7	31	27	166.5	154	171	1.9	1	2
*DAIRYLAND	STEALTH-1205	27.8	36	--	181.3	157	--	0.5	0	--
JUNG	2680	27.8	--	--	162.5	--	--	0.5	--	--
CROW'S	375	28.0	--	--	158.8	--	--	2.4	--	--
AGRIGENE	AG4250	28.1	--	--	144.2	--	--	0.5	--	--
CARGILL	4277	28.1	--	--	163.9	--	--	0.0	--	--
*ASGROW	RX623	28.2	33	--	178.9	161	--	2.4	2	--
GREAT LAKES	GL559	28.3	36	--	154.1	147	--	0.0	1	--
*CARGILL	4327	28.3	36	32	183.8	160	169	0.5	4	3
CROW'S	210	28.3	32	--	160.0	151	--	0.0	0	--
TERRA	E1031	28.4	--	--	162.9	--	--	0.5	--	--
CALLAHAN	C7245	28.4	35	--	131.4	130	--	1.5	1	--
STINE	1059	28.5	--	--	135.0	--	--	0.0	--	--
AMCORN	PSX5555	28.7	32	28	156.9	147	164	0.5	2	2
AMCORN	PSX5757	28.8	33	29	149.4	146	160	0.5	1	2
GREAT LAKES	GL515	29.1	--	--	146.2	--	--	1.0	--	--
RUPP	Exp.3-220	29.1	--	--	155.4	--	--	1.6	--	--
PIONEER	3515	29.3	35	--	168.2	158	--	0.0	1	--
*FILLER		29.3	--	--	186.9	--	--	1.0	--	--

(continued below)

EARLY TRIAL (98 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
DAIRYLAND	STEALTH-1198	24.4	--	--	160.8	--	--	0.5	--	--
TERRA	E981	24.6	--	--	142.8	--	--	0.5	--	--
*JUNG	2496	24.7	30	26	164.8	159	171	0.5	1	1
GOLDEN HARVEST	H-2331	24.7	31	27	161.3	155	172	1.0	2	1
AMCORN	PSX4747	24.7	--	--	148.3	--	--	1.0	--	--
*PICKSEED	5990	24.9	29	--	166.7	147	--	0.0	2	--
MYCOGEN	3440	25.0	--	--	149.0	--	--	0.0	--	--
PAYCO	5331	25.0	--	--	144.9	--	--	0.0	--	--
PAYCO	5133	25.2	--	--	139.9	--	--	0.0	--	--
GREAT LAKES	GL471	25.3	--	--	157.3	--	--	2.4	--	--
GUTWEIN	2120	25.3	27	--	132.5	136	--	0.0	1	--
RENK	RK555	25.4	28	--	148.7	150	--	0.5	1	--
GREAT LAKES	GL450	25.5	30	27	148.5	144	162	1.9	1	2
PIONEER	X1002U	25.5	--	--	158.8	--	--	0.5	--	--
CALLAHAN	C7337	25.5	32	--	140.7	137	--	0.0	0	--
PAYCO	5131	25.9	--	--	154.3	--	--	0.5	--	--
FILLER		26.1	--	--	136.9	--	--	1.0	--	--
FILLER		26.1	31	--	163.3	147	--	1.4	1	--
BLANEY	2100	26.2	--	--	142.0	--	--	0.5	--	--
*DEKALB	DK485	26.5	33	29	166.2	149	167	0.0	0	0
ASGROW	RX497	26.5	32	--	146.9	133	--	0.5	0	--
FILLER		27.0	--	--	141.2	--	--	1.4	--	--
AVERAGE		23.0	28	25	152.1	145	161	0.8	1	1
RANGE		18.5	23	22	132.5	123	137	0.0	0	0
		TO	TO	TO	TO	TO	TO	TO	TO	TO
		27.0	33	29	179.9	164	173	4.3	2	2
LEAST SIGNIFICANT DIFFERENCE		1.3			12.2					
COEFFICIENT OF VARIANCE		8.3%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

LATE TRIAL (99 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
CARGILL	5327	29.4	36	--	158.6	143	--	0.0	0	--
RUPP	XR1644	29.6	33	--	137.6	132	--	0.5	1	--
CALLAHAN	C7446X	29.6	--	--	139.1	--	--	0.0	--	--
PIONEER	X1032D	29.9	--	--	164.7	--	--	1.4	--	--
*PIONEER	3573	30.3	35	31	188.8	173	192	2.4	1	1
PIONEER	3525	30.5	37	--	170.6	158	--	0.0	0	--
FILLER		30.5	--	--	147.3	--	--	0.0	--	--
*AMCORN	PSX9009	30.9	37	--	175.7	152	--	0.5	2	--
STINE	1080	31.5	--	--	168.1	--	--	1.4	--	--
CROW'S	445	32.8	--	--	147.7	--	--	1.5	--	--
CROW'S	401	34.7	41	--	149.9	132	--	0.5	1	--
MYCOGEN	5440	34.9	--	--	119.0	--	--	0.0	--	--
RUPP	XR1677	36.6	42	--	172.7	146	--	0.5	1	--
CROW'S	494	36.9	--	--	153.9	--	--	1.0	--	--
AVERAGE		27.7	32	28	157.9	151	166	0.9	1	2
RANGE		21.9	23	25	119.0	130	147	0.0	0	0
		TO	TO	TO	TO	TO	TO	TO	TO	TO
		36.9	42	32	188.8	174	192	3.8	4	3
LEAST SIGNIFICANT DIFFERENCE		1.6			15.6					
COEFFICIENT OF VARIANCE		10.3%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

1993
PLANTED May 12
HARVESTED November 8
SOIL TYPE Kilmanagh Loam
PREVIOUS CROP Corn
POPULATION 27,300
ROW WIDTH 30"
FERTILIZER 115-0-0
SOIL TEST: pH 6.1
P 160 (very high)
K 392 (very high)

1992
May 15
December 2
Kilmanagh Loam
Corn
25,700
30"
149-41-96+zinc
6.8
133 (very high)
366 (very high)

1991
May 15
October 16
Kilmanagh Loam
Corn
27,400
30"
160-141-6
6.9
98 (high)
384 (very high)

FARM COOPERATORS: William, Ron and Ed McCrea, Bad Axe
COUNTY EXTENSION DIRECTOR: Robert Johnson, Bad Axe
EXTENSION AGRICULTURAL AGENT: James LeCureux, Bad Axe

TABLE 10

NORTH CENTRAL MICHIGAN

MONTCALM COUNTY - IRRIGATED TRIAL

ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

ZONE 3

EARLY TRIAL (98 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
DEKALB	DK401	15.6	18	17	157.9	157	176	1.3	2	2
PAYCO	402	16.6	--	--	131.1	--	--	6.4	--	--
PAYCO	248	16.7	--	--	129.8	--	--	5.6	--	--
PAYCO	3131	16.7	--	--	155.4	--	--	10.9	--	--
CARGILL	2927	17.2	21	20	147.4	156	176	7.8	7	6
ANDERSONS	HSX44011	17.2	--	--	151.7	--	--	2.6	--	--
PAYCO	4211	17.8	--	--	154.1	--	--	7.7	--	--
PIONEER	3861	18.2	20	--	157.9	164	--	3.0	2	--
NORTHROP KING	N2933	18.3	--	--	131.9	--	--	14.7	--	--
PAYCO	2432	18.3	--	--	127.5	--	--	5.1	--	--
DEKALB	DK381	18.4	18	--	163.0	171	--	4.3	2	--
CIBA	4120	18.4	19	19	104.1	122	156	3.8	2	2
STINE	92-23X	18.4	--	--	150.5	--	--	1.7	--	--
*GOLDEN HARVEST	H-2331	18.4	21	20	170.2	184	199	1.3	1	2
CALLAHAN	C729	18.4	20	20	118.5	132	153	7.8	4	3
CALLAHAN	C725	18.4	21	20	163.9	160	172	8.1	4	4
TOP FARM	TFsx2195	18.5	--	--	151.6	--	--	11.2	--	--
TERRA	TR910	18.7	20	--	161.8	152	--	3.8	2	--
AMCORN	PSX3333	18.7	21	20	130.5	138	165	16.7	9	7
GRIES	GSP-2393	18.9	--	--	157.1	--	--	6.4	--	--
TOP FARM	TFsx1193	19.1	--	--	140.1	--	--	3.8	--	--
PAYCO	5133	19.1	--	--	144.9	--	--	11.7	--	--
CIBA	4070	19.2	19	--	143.7	142	--	6.8	6	--
FILLER	19.2	--	--	--	140.7	--	--	4.7	--	--
PAYCO	4421	19.3	--	--	138.6	--	--	11.6	--	--
PICKSEED	5990	19.3	24	--	164.8	164	--	8.7	4	--
CALLAHAN	C7425X	19.3	--	--	159.8	--	--	1.3	--	--
BLANEY	2070	19.4	--	--	116.9	--	--	6.4	--	--
PAYCO	413	19.4	--	--	165.3	--	--	3.0	--	--
FILLER	19.5	--	--	--	164.9	--	--	3.0	--	--
PAYCO	253	19.5	--	--	134.1	--	--	17.3	--	--
CIBA	4172	19.6	--	--	158.7	--	--	5.1	--	--
*PAYCO	5331	19.7	--	--	192.6	--	--	1.3	--	--
ASGROW	RX433	19.9	--	--	165.2	--	--	2.1	--	--
*TERRA	E981	19.9	--	--	172.6	--	--	4.3	--	--
*MYCOGEN	3440	20.1	--	--	191.5	--	--	6.5	--	--
PIONEER	3921	20.1	21	--	152.8	156	--	5.1	3	--
PIONEER	3769	20.4	--	--	166.0	--	--	3.0	--	--
JACQUES	4440	20.6	24	--	166.5	167	--	3.8	2	--
PIONEER	3876	20.7	--	--	120.1	--	--	6.4	--	--
CALLAHAN	C7435X	20.7	--	--	162.8	--	--	2.7	--	--
*GREAT LAKES	GL450	20.8	22	21	190.7	180	197	1.3	1	2
GUTWEIN	2120	20.8	21	--	151.7	162	--	5.6	3	--
TOP FARM	TFsx109/A	20.9	21	21	147.4	158	168	4.3	3	2
CALLAHAN	C7337	21.0	23	--	163.1	171	--	4.3	2	--
*BLANEY	2100	21.1	--	--	186.0	--	--	0.4	--	--
*DEKALB	DK471	21.1	--	--	190.7	--	--	0.9	--	--
*PIONEER	3751	21.1	24	22	174.5	177	193	3.8	3	2
*FILLER	21.2	23	--	--	178.7	182	--	3.8	2	--
PICKSEED	5665	21.2	22	21	152.0	161	178	0.9	1	2

(continued below)

LATE TRIAL (99 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
*AGRIGENE	AG3965	21.0	--	--	173.7	--	--	0.4	--	--
NORTHROP KING	N4242	21.5	25	--	154.0	157	--	1.3	1	--
CIBA	4273	22.9	--	--	162.3	--	--	2.6	--	--
*PIONEER	3723	23.0	23	22	184.2	187	208	1.7	1	1
*RENK	RK617	23.4	24	--	173.3	175	--	0.4	0	--
GRIES	GSP-4100	23.8	--	--	133.3	--	--	0.9	--	--
TOP FARM	TFsx2102	23.8	--	--	142.4	--	--	0.0	--	--
CALLAHAN	C7339	23.8	--	--	162.0	--	--	0.0	--	--
RENK	RK657	24.2	23	--	156.0	162	--	1.3	2	--
JUNG	2648	24.3	23	--	138.6	162	--	0.0	0	--
*PIONEER	3733	24.4	25	23	176.8	167	192	1.3	1	1
DAIRYLAND	STEALTH-1202	24.4	23	--	129.5	141	--	0.0	2	--
NORTHROP KING	N3808	24.6	24	22	143.8	155	173	0.9	0	2
*CARGILL	3777	24.6	--	--	175.7	--	--	2.6	--	--
*JUNG	2596	24.6	--	--	179.5	--	--	0.4	--	--
DEKALB	DK493	24.7	--	--	165.3	--	--	0.0	--	--
ICI SEEDS	8777	24.8	25	--	158.2	169	--	0.9	1	--
RENK	RK602	24.8	26	23	164.4	167	174	2.6	1	2
STINE	993	25.0	--	--	170.9	--	--	0.0	--	--
GOLDEN HARVEST	H-2390	25.0	26	24	140.3	150	180	0.0	1	1
*FILLER	25.1	--	--	--	175.5	--	--	0.0	--	--
DAIRYLAND	STEALTH-1203	25.2	27	--	170.9	167	--	0.9	0	--
CROW'S	370	25.2	29	--	149.4	160	--	0.9	1	--
RUPP	XR1644	25.3	28	--	138.9	163	--	0.4	0	--
*PICKSEED	5993	25.5	24	--	173.3	182	--	0.4	0	--
BLANEY	405	25.6	27	24	157.8	162	173	0.0	1	3
TERRA	E1031	25.6	--	--	157.3	--	--	0.9	--	--
*PIONEER	3573	25.7	29	26	182.4	182	202	1.3	1	2
FILLER	26.0	--	--	--	160.6	--	--	0.4	--	--
*DEKALB	DK512	26.1	29	--	173.1	181	--	0.0	1	--
DAIRYLAND	DX-1100	26.1	26	24	154.1	158	180	0.9	1	1
AGRIGENE	AG4250	26.3	--	--	148.8	--	--	1.7	--	--
ICI SEEDS	8700	26.3	26	--	130.9	147	--	0.0	0	--
JUNG	2680	26.3	--	--	166.5	--	--	0.0	--	--
AMCORN	PSX5757	26.3	28	26	159.0	160	180	0.9	2	3
*GREAT LAKES	GL559	26.4	30	--	178.4	174	--	0.4	0	--
ICI SEEDS	SCI999	26.5	23	--	157.3	176	--	0.0	1	--
*ASGROW	RX623	26.5	31	--	185.2	176	--	0.4	0	--
GREAT LAKES	GL496	26.7	27	24	141.1	158	177	2.6	2	2
CALLAHAN	C7446X	26.7	--	--	149.1	--	--	1.3	--	--
DAIRYLAND	STEALTH-1205	26.8	31	--	161.4	168	--	0.0	0	--
RUPP	XR1623	26.8	--	--	140.9	--	--	1.7	--	--
DAIRYLAND	STEALTH-1108	27.0	--	--	168.0	--	--	0.9	--	--
*PIONEER	X1032D	27.1	--	--	189.5	--	--	0.4	--	--
CROW'S	375	27.1	--	--	150.2	--	--	0.9	--	--
GREAT LAKES	GL515	27.2	--	--	146.8	--	--	0.0	--	--
CROW'S	210	27.2	29	--	152.9	156	--	0.9	1	--
AMCORN	PSX5555	27.3	27	25	162.0	165	178	0.0	1	1
*CALLAHAN	C7245	28.0	30	--	180.0	175	--	0.4	0	--
*CARGILL	4277	28.1	--	--	182.3	--	--	0.4	--	--

(continued below)

EARLY TRIAL (98 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
	YR	YR	YR	YR	YR	YR	YR	YR	YR
DAIRYLAND STEALTH-1294	21.3	--	--	154.1	--	--	3.9	--	--
GOLDEN HARVEST H-2349	21.3	--	--	167.0	--	--	2.6	--	--
CALLAHAN C7434X	21.6	--	--	156.9	--	--	3.0	--	--
AMCORN PSX474/	21.7	--	--	138.7	--	--	1.7	--	--
PIONEER X1002U	21.8	--	--	148.8	--	--	10.3	--	--
CARGILL 3427	22.0	25	23	143.0	155	175	3.8	3	2
FILLER	22.1	--	--	155.3	--	--	3.0	--	--
PAYCO 5131	22.2	--	--	125.8	--	--	14.1	--	--
*DEKALB DK485	22.3	25	23	188.3	183	201	3.4	2	3
*DAIRYLAND STEALTH-1198	22.4	--	--	170.1	--	--	0.0	--	--
RENK RK555	22.4	23	--	155.7	162	--	3.0	2	--
GREAT LAKES GL471	22.5	--	--	142.4	--	--	4.3	--	--
JUNG 2496	22.7	24	23	160.9	169	179	5.2	4	3
PAYCO 5132	22.7	--	--	112.3	--	--	6.4	--	--
*JACQUES 4770	23.1	25	23	178.2	174	192	3.8	2	2
FILLER	23.3	--	--	150.9	--	--	1.3	--	--
ASCROW RX497	25.8	25	--	161.3	172	--	1.3	1	--
ANDERSONS HSX2241	**	--	--	**	--	--	**	--	--
NORTHROP KING N2409	**	--	--	**	--	--	**	--	--
NORTHROP KING N2879	**	--	--	**	--	--	**	--	--
FILLER	**	--	--	**	--	--	**	--	--
FILLER	**	--	--	**	--	--	**	--	--
AVERAGE	20.0	22	21	154.1	162	179	5.2	3	3
RANGE	15.6	18	17	104.1	122	153	0.0	1	2
	TO	TO	TO	TO	TO	TO	TO	TO	TO
	25.8	25	23	192.6	184	201	17.3	9	7
LEAST SIGNIFICANT DIFFERENCE	1.2			14.0					
COEFFICIENT OF VARIANCE	9.5%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

**NO RELIABLE YIELD DATA, EXTENSIVE RACCOON DAMAGE

LATE TRIAL (99 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
	YR	YR	YR	YR	YR	YR	YR	YR	YR
PIONEER 3515	28.4	31	--	156.0	173	--	0.0	0	--
FILLER	28.7	--	--	158.4	--	--	0.9	--	--
AMCORN PSX9009	28.9	30	--	158.8	169	--	0.4	0	--
STINE 1059	29.3	--	--	142.4	--	--	0.0	--	--
CARGILL 4327	29.4	33	29	167.4	177	191	0.9	1	2
RUPP Exp. 3-220	29.4	--	--	157.8	--	--	0.0	--	--
*MYCOGEN 5440	29.8	--	--	174.7	--	--	0.4	--	--
CARGILL 5327	30.0	32	--	149.9	154	--	1.7	1	--
PIONEER 3525	30.3	32	--	170.1	182	--	0.9	0	--
STINE 1080	30.6	--	--	162.2	--	--	0.0	--	--
*CROW'S 401	31.7	36	--	178.3	164	--	0.4	0	--
CROW'S 445	34.2	--	--	157.6	--	--	0.0	--	--
RUPP XR1677	35.3	38	--	157.4	156	--	0.0	0	--
CROW'S 494	35.5	--	--	150.3	--	--	0.9	--	--
AVERAGE	26.6	28	24	160.5	166	184	0.7	1	2
RANGE	21.0	23	22	129.5	141	173	0.0	0	1
	TO	TO	TO	TO	TO	TO	TO	TO	TO
	35.5	38	29	189.5	187	208	2.6	2	3
LEAST SIGNIFICANT DIFFERENCE	1.8			10.8					
COEFFICIENT OF VARIANCE	7.0%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

	1993	1992	1991
PLANTED	May 1	April 30	May 10
HARVESTED	November 3	November 10	October 21
SOIL TYPE	Montcalm-McBride Sandy Loam	Montcalm-McBride Sandy Loam	Montcalm-McBride Sandy Loam
PREVIOUS CROP	Potatoes	Potatoes	Potatoes
POPULATION	30,750	27,200	28,100
ROW WIDTH	30"	30"	30"
FERTILIZER	229-0-120	192-0-125	180-0-120
SOIL TEST: pH	5.5	6.2	6.2
P	464 (very high)	395 (very high)	310 (very high)
K	219 (high)	168 (medium)	151 (low)
IRRIGATION	5 inches	5 inches	5.5 inches

FARM COOPERATOR: Richard Crawford, Montcalm Research Farm, Entrican
COUNTY EXTENSION DIRECTOR: Donald Smucker, Stanton
EXTENSION AGRICULTURAL AGENTS: George Atkeson and Jill O'Donnell, Stanton

TABLE 11

NORTH CENTRAL MICHIGAN

ZONE 3

MASON COUNTY - IRRIGATED TRIAL
ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

EARLY TRIAL (98 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	2	3	1993	2	3	1993	2	3
PAYCO	248	18.1	--	--	114.7	--	--	3.3	--	--
*DEKALB	DK381	18.2	25	--	148.4	135	--	1.1	1	--
PAYCO	3131	18.2	--	--	127.0	--	--	0.0	--	--
ANDERSONS	HSX2241	18.4	--	--	117.7	--	--	1.1	--	--
PAYCO	2432	18.6	--	--	130.9	--	--	0.6	--	--
FILLER		19.5	--	--	131.9	--	--	1.6	--	--
NORTHRUP KING	N2409	19.6	--	--	136.9	--	--	1.1	--	--
PAYCO	402	19.6	--	--	143.7	--	--	1.6	--	--
FILLER		19.8	--	--	136.1	--	--	1.6	--	--
*PAYCO	253	19.9	--	--	152.2	--	--	5.3	--	--
*PAYCO	4211	19.9	--	--	152.5	--	--	2.8	--	--
CIBA	4070	20.1	23	--	118.5	119	--	2.2	1	--
NORTHRUP KING	N2933	20.2	--	--	137.5	--	--	2.1	--	--
STINE	92-23X	20.2	--	--	143.5	--	--	0.6	--	--
PIONEER	3861	20.3	26	--	145.5	144	--	1.0	2	--
TOP FARM	TFsx1193	20.4	--	--	125.0	--	--	1.8	--	--
PIONEER	3921	20.5	24	--	146.3	137	--	2.2	2	--
CALLAHAN	C7425X	20.5	--	--	142.5	--	--	2.2	--	--
GRIES	GSF-2393	20.6	--	--	137.7	--	--	2.2	--	--
ANDERSONS	HSX44011	20.6	--	--	114.7	--	--	1.1	--	--
PAYCO	413	20.8	--	--	143.9	--	--	1.2	--	--
PICKSEED	5665	20.8	26	25	126.1	135	156	3.1	4	4
CIBA	4172	21.0	--	--	148.2	--	--	1.6	--	--
NORTHRUP KING	N2879	21.1	--	--	133.8	--	--	1.1	--	--
*BLANEY	2070	21.4	--	--	156.1	--	--	3.1	--	--
DEKALB	DK401	21.4	25	23	140.1	134	144	1.1	1	2
FILLER		21.4	--	--	134.8	--	--	0.0	--	--
CALLAHAN	C725	21.4	26	25	133.6	122	141	2.2	3	3
*MYCOGEN	3440	21.5	--	--	156.5	--	--	1.1	--	--
PIONEER	X1002U	21.5	--	--	147.9	--	--	1.1	--	--
PIONEER	3751	21.5	27	26	147.9	146	165	0.6	1	2
CIBA	4120	21.7	24	22	133.1	117	143	1.1	1	1
*TERRA	TR910	21.7	28	--	150.0	136	--	1.6	3	--
*CARGILL	2927	21.8	27	25	150.0	141	156	1.7	1	2
TOP FARM	TFsx1097A	21.9	27	26	127.6	129	143	1.8	3	2
FILLER		21.9	--	--	111.3	--	--	5.0	--	--
PAYCO	4421	21.9	--	--	147.7	--	--	2.6	--	--
PIONEER	3876	22.0	--	--	144.5	--	--	0.0	--	--
ASGROW	RX433	22.0	--	--	141.0	--	--	4.1	--	--
CALLAHAN	C729	22.1	28	26	135.4	120	137	4.8	6	5
PAYCO	5133	22.2	--	--	122.1	--	--	0.6	--	--
CALLAHAN	C7435X	22.2	--	--	134.4	--	--	2.3	--	--
DAIRYLAND	STEALTH-1294	22.3	--	--	120.2	--	--	3.1	--	--
TOP FARM	TFsx2195	22.4	--	--	132.9	--	--	0.6	--	--
PAYCO	5132	22.5	--	--	139.6	--	--	1.6	--	--
*PIONEER	3769	22.6	--	--	170.5	--	--	1.6	--	--
PAYCO	5131	22.6	--	--	147.0	--	--	0.5	--	--
DAIRYLAND	STEALTH-1198	22.7	--	--	93.3	--	--	43.2	--	--
PICKSEED	5990	22.8	29	--	126.7	123	--	1.8	3	--
TERRA	E981	23.1	--	--	115.2	--	--	4.5	--	--

(continued below)

LATE TRIAL (99 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))										
HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	2	3	1993	2	3	1993	2	3
*NORTHRUP KING	N4242	21.2	30	--	158.4	139	--	1.0	2	--
NORTHRUP KING	N3808	22.6	29	27	134.2	129	151	2.8	4	5
*STINE	993	22.6	--	--	155.7	--	--	2.6	--	--
AGRIGENE	AG3965	22.8	--	--	141.9	--	--	1.6	--	--
RENK	RK617	23.4	30	--	115.3	117	--	6.8	6	--
*PIONEER	3723	23.5	28	26	165.4	151	179	1.0	1	1
CALLAHAN	C7339	23.7	--	--	135.2	--	--	2.1	--	--
CIBA	4273	23.8	--	--	151.6	--	--	1.1	--	--
ICI SEEDS	8777	23.9	30	--	146.5	141	--	0.0	1	--
*DEKALB	DK493	24.0	--	--	161.5	--	--	2.8	--	--
FILLER		24.0	--	--	142.5	--	--	2.6	--	--
DAIRYLAND	DX-1100	24.1	28	26	137.0	130	157	2.6	3	3
DAIRYLAND	STEALTH-1202	24.1	31	--	132.9	121	--	2.4	8	--
TOP FARM	TFsx2102	24.1	--	--	100.0	--	--	3.2	--	--
*CROW'S	370	24.1	33	--	155.5	128	--	1.1	3	--
ICI SEEDS	8700	24.2	32	--	138.3	118	--	0.5	2	--
*PIONEER	3733	24.8	30	28	159.8	140	174	0.0	1	1
GRIES	GSF-4100	25.0	--	--	134.1	--	--	2.3	--	--
GREAT LAKES	GL496	25.5	29	27	138.3	142	164	1.8	2	3
DAIRYLAND	STEALTH-1203	25.5	32	--	141.5	132	--	2.3	2	--
RENK	RK657	25.5	30	--	139.8	129	--	1.6	3	--
JUNG	2648	25.5	29	--	147.2	135	--	0.0	4	--
RENK	RK602	25.7	29	27	140.8	133	156	1.1	2	2
CARGILL	3777	25.8	--	--	150.1	--	--	0.6	--	--
RUPP	XR1623	25.8	--	--	142.7	--	--	0.0	--	--
BLANEY	405	25.9	33	30	135.5	124	147	2.1	2	2
*GOLDEN HARVEST	H-2390	25.9	31	30	155.8	140	163	0.0	0	2
*PIONEER	X1032D	26.2	--	--	161.6	--	--	1.6	--	--
*FILLER		26.5	--	--	161.9	--	--	0.5	--	--
ICI SEEDS	SC1999	26.8	26	--	126.5	156	--	2.2	2	--
TERRA	E1031	26.8	--	--	141.5	--	--	1.1	--	--
DAIRYLAND	STEALTH-1108	26.9	--	--	133.0	--	--	2.3	--	--
*JUNG	2596	26.9	--	--	164.1	--	--	0.5	--	--
*RUPP	XR1644	27.0	34	--	158.9	136	--	1.0	1	--
GREAT LAKES	GL515	27.2	--	--	130.6	--	--	1.0	--	--
*ASGROW	RX623	27.2	34	--	158.3	139	--	1.0	1	--
DAIRYLAND	STEALTH-1205	27.2	36	--	134.7	123	--	1.1	1	--
CARGILL	4277	27.3	--	--	136.9	--	--	1.6	--	--
CROW'S	375	27.6	--	--	134.5	--	--	2.2	--	--
PICKSEED	5993	27.6	31	--	146.0	144	--	0.5	1	--
AMCORN	PSX5757	27.6	34	32	135.5	132	156	2.3	4	3
JUNG	2680	27.8	--	--	148.8	--	--	3.5	--	--
AMCORN	PSX5555	27.9	31	29	133.0	128	149	2.9	4	5
GREAT LAKES	GL559	28.0	35	--	152.9	133	--	0.0	1	--
CROW'S	210	28.1	35	--	130.0	119	--	2.1	1	--
CALLAHAN	C7446X	28.1	--	--	150.4	--	--	1.6	--	--
AGRIGENE	AG4250	28.3	--	--	130.9	--	--	1.2	--	--
CARGILL	4327	28.3	36	33	137.8	123	156	2.7	2	2
*PIONEER	3525	28.6	36	--	166.9	145	--	1.1	1	--
RUPP	Exp.3-220	28.6	--	--	130.5	--	--	4.6	--	--

(continued below)

EARLY TRIAL (98 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	3	1993	YR	3	1993	YR	3
CALLAHAN	C7337	23.1	30	--	122.7	124	--	19.7	15	--
DEKALB	DK471	23.2	--	--	145.5	--	--	1.7	--	--
PAYCO	5331	23.3	--	--	136.4	--	--	11.4	--	--
BLANEY	2100	23.5	--	--	131.4	--	--	5.6	--	--
GREAT LAKES	GL450	23.5	31	29	138.8	130	153	13.5	8	6
FILLER		23.5	30	--	123.6	125	--	8.6	6	--
CALLAHAN	C7434X	23.8	--	--	144.8	--	--	2.2	--	--
GREAT LAKES	GL471	23.9	--	--	135.9	--	--	2.4	--	--
*GOLDEN HARVEST	H-2331	24.0	32	30	148.6	136	163	2.1	4	4
AMCORN	PSX3333	24.0	31	28	126.2	114	135	1.2	3	3
*GOLDEN HARVEST	H-2349	24.3	--	--	166.2	--	--	0.0	--	--
CARGILL	3427	24.4	30	27	147.5	135	160	2.1	2	3
GUTWEIN	2120	24.9	28	--	128.6	126	--	0.6	2	--
AMCORN	PSX4747	24.9	--	--	115.8	--	--	2.5	--	--
JACQUES	4440	25.0	29	--	144.1	131	--	2.6	2	--
ASGROW	RX497	25.2	31	--	136.6	130	--	1.1	2	--
*JACQUES	4770	25.4	31	29	163.1	142	162	4.3	5	4
FILLER		25.4	--	--	142.0	--	--	1.0	--	--
DEKALB	DK485	25.5	30	30	146.5	144	158	5.5	4	4
JUNG	2496	25.5	29	28	143.3	136	153	1.7	2	3
RENK		25.8	30	--	137.6	132	--	0.6	2	--
FILLER	RK555	26.1	--	--	135.4	--	--	4.7	--	--
AVERAGE		22.1	28	27	137.2	131	151	3.2	3	3
RANGE		18.1	23	22	93.3	114	135	0.0	1	1
		26.1	32	30	170.5	146	165	43.2	15	6
LEAST SIGNIFICANT DIFFERENCE		1.2			11.1					
COEFFICIENT OF VARIANCE		8.4%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

LATE TRIAL (99 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	3	1993	YR	3	1993	YR	3
PIONEER	3515	28.9	37	--	150.1	133	--	1.6	1	--
MYCOGEN	5440	29.1	--	--	152.1	--	--	1.1	--	--
CALLAHAN	C7245	29.1	37	--	138.4	122	--	1.1	2	--
DEKALB	DK512	29.2	36	--	134.4	130	--	1.1	2	--
STINE	1059	29.2	--	--	114.9	--	--	1.7	--	--
STINE	1080	29.2	--	--	140.2	--	--	0.6	--	--
*FILLER		29.3	--	--	154.0	--	--	2.3	--	--
AMCORN	PSX9009	29.3	36	--	136.7	122	--	1.1	3	--
*PIONEER	3573	29.7	35	32	159.3	142	174	0.5	0	1
CARGILL	5327	31.2	37	--	149.7	125	--	2.7	3	--
CROW'S	445	32.1	--	--	146.8	--	--	0.0	--	--
CROW'S	494	33.2	--	--	123.2	--	--	5.3	--	--
CROW'S	401	36.6	41	--	143.7	118	--	0.5	0	--
RUPP	XR1677	37.8	42	--	137.7	120	--	1.7	1	--
AVERAGE		26.9	33	29	142.9	132	161	1.7	2	2
RANGE		21.2	26	26	100.0	117	147	0.0	0	1
		37.8	42	33	166.9	156	179	6.8	8	5
LEAST SIGNIFICANT DIFFERENCE		2.1			10.9					
COEFFICIENT OF VARIANCE		7.9%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

	1993	1992	1991
PLANTED	May 10	May 14	May 11
HARVESTED	November 3	November 19	October 9
SOIL TYPE	Arenac Loamy Sand	Ogemaw Sandy Loam	Arenac Loamy Sand
PREVIOUS CROP	Snap Beans-rye cover	Snap beans-rye cover	Snap beans-rye cover
POPULATION	23,950	24,100	26,600
ROW WIDTH	30"	30"	30"
FERTILIZER	120-0-60+10 tons manure	82-30-39+10 tons manure	109-23-30+10 tons manure
SOIL TEST: pH	6.5	6.5	6.6
P	272 (very high)	372 (very high)	169 (very high)
K	368 (very high)	598 (very high)	328 (very high)
IRRIGATION	2 inches	2 inches	4 inches

FARM COOPERATORS: Robert and August Oshe, Scottville
COUNTY EXTENSION DIRECTOR: David Peterson, Scottville

TABLE 12

NORTH CENTRAL MICHIGAN

ZONE 3

AVERAGE OF HURON, MONTCALM & MASON COUNTY TRIALS
ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

EARLY TRIAL (98 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
PAYCO 3111	17.8	--	--	142.3	--	--	4.1	--	--
PAYCO 248	18.3	--	--	128.2	--	--	4.4	--	--
PAYCO 402	18.8	--	--	140.6	--	--	2.8	--	--
ANDERSONS HSX2241	19.0	--	--	**127.5	--	--	1.1	--	--
*DEKALB DK381	19.1	22	--	161.7	157	--	1.8	1	--
DEKALB DK401	19.3	22	21	149.0	143	159	0.8	1	2
PAYCO 2432	19.3	--	--	135.7	--	--	2.5	--	--
CARGILL 2927	19.5	24	23	154.1	151	167	3.3	3	4
*PAYCO 4211	19.5	--	--	158.7	--	--	3.7	--	--
STINE 92-23X	19.7	--	--	149.6	--	--	1.4	--	--
ANDERSONS HSX44011	19.7	--	--	138.3	--	--	1.2	--	--
PAYCO 253	19.9	--	--	147.6	--	--	8.5	--	--
CIBA 4070	20.1	22	--	134.4	132	--	3.2	3	--
NORTHROP KING N2933	20.1	--	--	139.1	--	--	5.6	--	--
PIONEER 3861	20.1	24	--	154.4	154	--	2.6	2	--
TOP FARM TFSx1193	20.2	--	--	138.8	--	--	1.9	--	--
413	20.2	--	--	153.9	--	--	2.4	--	--
FILLER 20.3	20.3	--	--	140.9	--	--	2.3	--	--
NORTHROP KING N2409	20.4	--	--	**150.7	--	--	0.8	--	--
FILLER 20.5	20.5	--	--	**142.5	--	--	0.8	--	--
CIBA 4172	20.6	--	--	149.2	--	--	2.2	--	--
CALLAHAN C725	20.7	24	23	148.5	142	158	3.9	3	3
GRIES GSF-2393	20.8	--	--	150.5	--	--	3.0	--	--
*TERRA TR910	20.8	24	--	154.7	143	--	2.0	2	--
PIONEER 3921	20.9	23	--	149.2	148	--	2.4	1	--
FILLER 20.9	20.9	--	--	142.0	--	--	3.6	--	--
CIBA 4120	21.0	23	21	126.3	124	152	1.6	1	1
PAYCO 4421	21.0	--	--	146.2	--	--	5.1	--	--
BLANEY 2070	21.1	--	--	147.3	--	--	4.1	--	--
CALLAHAN C729	21.1	25	23	129.7	125	142	4.4	4	3
AMCORN PSX3333	21.3	26	24	134.3	131	152	6.1	5	4
CALLAHAN C7425X	21.3	--	--	152.2	--	--	1.3	--	--
TOP FARM TFSx2195	21.4	--	--	147.7	--	--	4.1	--	--
DAIRYLAND STEALTH-1294	21.5	--	--	140.1	--	--	2.5	--	--
CALLAHAN C7435X	21.6	--	--	153.8	--	--	1.7	--	--
ASGROW RX433	21.7	--	--	154.1	--	--	2.4	--	--
PIONEER 3876	21.8	--	--	137.2	--	--	2.1	--	--
PICKSEED 5665	21.8	26	24	141.3	145	161	1.7	2	2
NORTHROP KING N2879	22.0	--	--	**139.6	--	--	0.8	--	--
*PIONEER 3751	22.1	27	25	159.5	159	177	1.5	1	2
FILLER 22.1	22.1	--	--	**139.0	--	--	0.0	--	--
*MYCOGEN 3440	22.2	--	--	165.7	--	--	2.5	--	--
PAYCO 5133	22.2	--	--	135.6	--	--	4.1	--	--
*PIONEER 3769	22.3	--	--	172.1	--	--	1.5	--	--
TOP FARM TFSx1097A	22.3	25	24	141.5	143	155	3.2	2	2
PICKSEED 5990	22.3	27	--	152.7	145	--	3.5	3	--
*GOLDEN HARVEST H-2331	22.4	28	26	160.0	159	178	1.5	2	2
TERRA E981	22.5	--	--	143.5	--	--	3.1	--	--
*DEKALB DK471	22.6	--	--	168.3	--	--	0.9	--	--
*PAYCO 5331	22.7	--	--	158.0	--	--	4.2	--	--

(continued below)

LATE TRIAL (99 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHELS PER ACRE			% STALK LODGING		
	1993	2	3	1993	2	3	1993	2	3
AGRIGENE AG3965	21.9	--	--	157.9	--	--	0.8	--	--
NORTHROP KING N4242	22.2	28	--	157.5	150	--	0.9	1	--
*PIONEER 3723	23.4	27	24	170.8	165	186	0.9	1	1
CIBA 4273	23.6	--	--	156.1	--	--	1.4	--	--
CALLAHAN C7339	23.7	--	--	154.8	--	--	0.9	--	--
*DEKALB DK493	23.8	--	--	165.6	--	--	1.9	--	--
NORTHROP KING N3808	23.8	27	25	148.0	147	165	1.7	2	3
RENK RK617	24.0	28	--	151.7	147	--	2.7	3	--
*STINE 993	24.1	--	--	164.0	--	--	1.0	--	--
TOP FARM TFSx2102	24.1	--	--	130.6	--	--	1.2	--	--
ICI SEEDS 8777	24.3	28	--	151.0	152	--	0.8	1	--
DAIRYLAND STEALTH-1202	24.3	28	--	133.7	135	--	1.3	4	--
*PIONEER 3733	24.7	28	26	170.5	157	179	0.9	1	1
JUNG 2648	24.8	26	--	149.7	150	--	1.3	2	--
ICI SEEDS 8700	25.0	29	--	139.8	137	--	0.5	1	--
RENK RK657	25.1	28	--	146.6	144	--	1.3	2	--
DAIRYLAND DK-1100	25.2	29	26	148.3	147	167	2.0	2	2
*CARGILL 3777	25.3	--	--	163.0	--	--	1.4	--	--
CROW'S 370	25.4	32	--	151.9	145	--	1.5	2	--
GRIES GSF-4100	25.5	--	--	143.1	--	--	1.1	--	--
*JUNG 2596	25.5	--	--	167.3	--	--	0.6	--	--
DAIRYLAND STEALTH-1203	25.6	31	--	157.1	150	--	1.4	1	--
*FILLER 25.7	25.7	--	--	163.6	--	--	0.3	--	--
GOLDEN HARVEST H-2390	25.8	29	27	149.9	144	166	0.6	1	2
BLANEY 405	25.9	30	27	149.0	147	161	1.0	1	2
RENK RK602	26.0	28	26	144.0	146	159	1.7	2	2
PICKSEED 5993	26.4	28	--	160.0	162	--	0.3	1	--
RUPP XR1623	26.5	--	--	149.8	--	--	0.6	--	--
GREAT LAKES GL496	26.6	29	26	148.6	151	171	2.1	2	2
ICI SEEDS SC1999	26.7	24	--	145.2	169	--	1.4	2	--
FILLER 26.8	26.8	--	--	150.1	--	--	1.0	--	--
TERRA E1031	26.9	--	--	153.9	--	--	0.8	--	--
DEKALB DK512	27.0	32	--	156.2	158	--	0.5	2	--
DAIRYLAND STEALTH-1108	27.0	--	--	151.7	--	--	1.2	--	--
*ASGROW RK623	27.3	33	--	174.1	159	--	1.3	1	--
DAIRYLAND STEALTH-1205	27.3	34	--	159.1	149	--	0.5	0	--
RUPP 27.3	27.3	32	--	145.1	144	--	0.6	1	--
JUNG 2680	27.3	--	--	159.3	--	--	1.3	--	--
*GREAT LAKES GL559	27.6	34	--	161.8	151	--	0.1	1	--
AGRIGENE AG4250	27.6	--	--	141.3	--	--	1.1	--	--
CROW'S 375	27.6	--	--	147.8	--	--	1.8	--	--
AMCORN PSX5757	27.6	32	29	148.0	146	165	1.2	3	3
*PIONEER X1032D	27.7	--	--	171.9	--	--	1.1	--	--
GREAT LAKES GL515	27.8	--	--	141.2	--	--	0.7	--	--
*CARGILL 4277	27.8	--	--	161.0	--	--	0.7	--	--
CROW'S 210	27.9	32	--	147.6	142	--	1.0	1	--
AMCORN PSX5555	28.0	30	27	150.6	147	164	1.1	2	2
CALLAHAN C7446X	28.1	--	--	146.2	--	--	1.0	--	--
CALLAHAN C7245	28.5	34	--	149.9	142	--	1.0	1	--
*PIONEER 3573	28.6	33	29	176.8	166	190	1.4	1	1

(continued below)

EARLY TRIAL (98 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	YR	YR	1993	YR	YR	1993	YR	YR
PIONEER X1002U	22.9	--	--	151.8	--	--	4.0	--	--
PAYCO 5132	22.9	--	--	137.0	--	--	2.7	--	--
CALLAHAN C7434X	22.9	--	--	150.0	--	--	2.7	--	--
*JACQUES 4440	23.1	27	--	155.7	152	--	2.1	2	--
DAIRYLAND STEALTH-1198	23.2	--	--	141.4	--	--	14.6	--	--
CALLAHAN C7337	23.2	28	--	142.2	144	--	8.0	6	--
*GREAT LAKES GL450	23.3	28	26	159.3	151	171	5.6	4	3
CARGILL 3427	23.3	28	26	151.0	145	167	2.1	2	2
*GOLDEN HARVEST H-2349	23.3	--	--	162.0	--	--	1.2	--	--
BLANEY 2100	23.6	--	--	153.1	--	--	2.2	--	--
*FILLER C7337	23.6	28	--	155.2	151	--	4.6	3	--
PAYCO 5131	23.6	--	--	142.4	--	--	5.0	--	--
GUTWEIN 2120	23.7	26	--	137.6	141	--	2.1	2	--
AMCORN PSX4747	23.8	--	--	134.3	--	--	1.7	--	--
GREAT LAKES GL471	23.9	--	--	145.2	--	--	3.0	--	--
*JACQUES 4770	24.0	29	26	163.6	153	174	2.9	3	2
*JUNG 2496	24.3	28	25	156.3	155	168	2.5	2	3
RENK RK555	24.5	27	--	147.3	148	--	1.4	1	--
*DEKALB DK485	24.8	29	27	167.0	159	176	3.0	2	2
FILLER 24.8	--	--	--	146.2	--	--	1.8	--	--
FILLER RX497	25.2	--	--	141.1	--	--	2.3	--	--
ASGROW 25.8	29	--	--	148.3	145	--	1.0	1	--
AVERAGE	21.7	26	24	147.4	146	164	3.0	2	2
RANGE	17.8	22	21	126.3	124	142	0.0	1	1
	TO	TO	TO	TO	TO	TO	TO	TO	TO
	25.8	29	27	172.1	159	178	14.6	6	4
LEAST SIGNIFICANT DIFFERENCE	0.9			7.1					
COEFFICIENT OF VARIANCE	8.8%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

**AVERAGE DOES NOT INCLUDE MONTICLAIM'S ZERO DATA

LATE TRIAL (99 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)	% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
	1993	YR	YR	1993	YR	YR	1993	YR	YR
*CARGILL 4327	28.7	35	31	163.0	153	172	1.4	2	2
PIONEER 3515	28.9	34	--	158.1	155	--	0.5	1	--
STINE 1059	29.0	--	--	130.8	--	--	0.6	--	--
RUPP Exp.3-220	29.0	--	--	147.9	--	--	2.1	--	--
*FILLER 29.1	--	--	--	166.4	--	--	1.4	--	--
AMCORN PSX9009	29.7	34	--	157.1	148	--	0.7	2	--
*PIONEER 3525	29.8	35	--	169.2	161	--	0.7	1	--
CARGILL 5327	30.2	35	--	152.7	141	--	1.5	1	--
STINE 1080	30.4	--	--	156.8	--	--	0.7	--	--
MYCOGEN 5440	31.3	--	--	148.6	--	--	0.5	--	--
CROW'S 445	33.0	--	--	150.7	--	--	0.5	--	--
CROW'S 401	34.3	39	--	157.3	138	--	0.5	0	--
CROW'S 494	35.2	--	--	142.5	--	--	2.4	--	--
RUPP XR1677	36.6	41	--	155.9	141	--	0.7	1	--
AVERAGE	27.1	31	27	153.7	150	170	1.1	1	2
RANGE	21.9	24	24	130.6	135	159	0.1	0	1
	TO	TO	TO	TO	TO	TO	TO	TO	TO
	36.6	41	31	176.8	169	190	2.7	4	3
LEAST SIGNIFICANT DIFFERENCE	1.1			7.2					
COEFFICIENT OF VARIANCE	8.6%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

TABLE 13

NORTHERN MICHIGAN

ZONE 4

ALPENA COUNTY TRIAL-GRAIN
ONE, TWO, THREE YEAR AVERAGES - 1993, 1992, 1991

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
CIBA	4024	24.0	--	--	79.7	--	--	10.4	--	--
*DEKALB	DK306	26.8	--	--	111.2	--	--	2.7	--	--
TERRA	TR230E	27.9	--	--	87.9	--	--	0.6	--	--
WOLF RIVER VAL	WRV-9185	28.0	--	--	94.6	--	--	2.3	--	--
*DAIRYLAND	STEALTH-1285	29.3	--	--	103.6	--	--	1.9	--	--
PICKSEED	2620	29.5	32	--	94.9	100	--	2.2	2	--
*PIONEER	3907	29.8	--	--	121.2	--	--	0.5	--	--
PICKSEED	2621	30.1	33	--	97.3	102	--	3.3	6	--
*PAYCO	253	30.2	--	--	102.8	--	--	2.2	--	--
FILLER		30.8	--	--	95.5	--	--	0.5	--	--
*PIONEER	3921	31.2	33	30	111.1	121	118	0.0	2	3
JUNG	2284	31.5	--	--	91.9	--	--	1.7	--	--
DEKALB	DK401	31.6	35	--	96.1	113	--	1.1	1	--
*TERRA	E860	31.7	--	--	105.5	--	--	2.4	--	--
DAIRYLAND	STEALTH-1175	31.7	--	--	81.5	--	--	3.3	--	--
FILLER		31.7	--	--	83.1	--	--	2.7	--	--
*NORTHROP KING	N2409	31.8	35	32	105.1	115	109	2.2	2	3
DAIRYLAND	STEALTH-1180	32.3	--	--	84.2	--	--	2.9	--	--
*PIONEER	3861	32.7	37	--	103.2	106	--	0.5	3	--
DAIRYLAND	STEALTH-1185	32.9	33	--	92.1	102	--	1.1	1	--
PAYCO	222	33.3	--	--	93.8	--	--	2.9	--	--
DEKALB	DK381	33.5	36	--	94.9	104	--	2.3	2	--
DAIRYLAND	STEALTH-1187	33.5	--	--	91.0	--	--	0.5	--	--
DEKALB	DK352	34.0	35	31	93.7	103	99	0.5	2	2
*ICI SEEDS	8954	34.0	35	--	103.7	108	--	1.1	3	--
*CARGILL	X2497	34.2	--	--	111.2	--	--	0.0	--	--
JUNG	2386	34.8	--	--	80.9	--	--	2.3	--	--
*PIONEER	X1002U	35.0	--	--	104.2	--	--	2.7	--	--
VIGORO	V Exp.830001	35.2	--	--	100.4	--	--	2.4	--	--
VIGORO	V Exp.830004	35.2	--	--	95.8	--	--	1.7	--	--
*PICKSEED	4990	35.2	38	--	101.4	109	--	0.0	1	--
*PIONEER	3876	35.5	--	--	105.5	--	--	1.1	--	--
*ICI SEEDS	8883	35.5	37	--	108.1	113	--	2.2	2	--
AMCORN	PSX1185	35.9	--	--	84.2	--	--	0.0	--	--
CARGILL	2037	36.7	--	--	87.0	--	--	0.6	--	--

(continued next column)

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
AMCORN	PSX3333	36.9	37	--	91.3	92	--	1.2	5	--
PIONEER	3769	37.8	--	--	100.5	--	--	1.1	--	--
RUPP	XR1469	37.8	--	--	72.3	--	--	1.2	--	--
*CIBA	4120	38.1	--	--	104.0	--	--	1.6	--	--
PIONEER	3733	38.7	40	37	93.5	102	108	1.6	3	2
NORTHROP KING	N2879	38.8	40	36	91.8	108	109	1.6	5	5
PAYCO	3131	38.9	--	--	65.8	--	--	0.0	--	--
PIONEER	3723	39.7	41	38	96.0	106	105	0.5	1	1
RUPP	XR2319	39.7	39	--	73.0	88	--	0.5	1	--
FILLER		40.2	--	--	98.8	--	--	0.5	--	--
CARGILL	2927	40.4	42	39	94.4	100	97	1.1	2	2
PIONEER	3751	40.7	42	39	98.0	114	115	2.7	3	3
JUNG	2394	41.5	--	--	82.4	--	--	1.8	--	--
*JACQUES	4440	42.4	42	--	105.7	111	--	1.1	1	--
RUPP	XR1489	42.9	--	--	63.9	--	--	1.1	--	--
MYCOGEN	3440	43.7	--	--	80.6	--	--	0.0	--	--
JUNG	2496	43.9	42	40	98.8	108	104	2.9	3	5
CARGILL	3427	44.7	43	41	100.1	109	109	1.1	2	3
DAIRYLAND	STEALTH-1198	46.0	--	--	68.0	--	--	0.0	--	--
RUPP	XR1505	47.1	44	--	61.7	83	--	0.0	1	--
PIONEER	X1032D	47.7	--	--	85.1	--	--	0.5	--	--
AVERAGE		35.6	38	36	93.3	105	107	1.6	2	3
RANGE		24.0	32	30	61.7	83	97	0.0	1	1
		TO	TO	TO	TO	TO	TO	TO	TO	TO
		47.7	44	41	121.2	121	118	10.4	6	5
LEAST SIGNIFICANT DIFFERENCE		2.3			7.5					
COEFFICIENT OF VARIANCE		8.4%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

1993
PLANTED May 12
HARVESTED November 12
SOIL TYPE Selkirk Loam
PREVIOUS CROP Navy beans
POPULATION 23,600
ROW WIDTH 30"
FERTILIZER 104-47-103
SOIL TEST: pH 7.5
P 89 (high)
K 368 (very high)

1992
PLANTED May 9
HARVESTED December 9
SOIL TYPE Selkirk Loam
PREVIOUS CROP Navy beans
POPULATION 23,100
ROW WIDTH 30"
FERTILIZER 124-38-66
SOIL TEST: pH 6.8
P 148 (very high)
K 244 (high)

1991
PLANTED May 13
HARVESTED October 8
SOIL TYPE Selkirk Loam
PREVIOUS CROP Navy beans
POPULATION 24,500
ROW WIDTH 30"
FERTILIZER 12-48-48
SOIL TEST: pH 5.9
P 113 (very high)
K 224 (high)

FARM COOPERATOR: Allen Schiellard, Hubbard Lake
COUNTY EXTENSION DIRECTOR: Paul Wegmeyer, Alpena

TABLE 14

NORTHERN MICHIGAN

GRAND TRAVERSE COUNTY TRIAL

ONE, TWO, YEAR AVERAGES - 1993, 1992, 1991

ZONE 4

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
CIBA	4024	24.2	--	--	94.8	--	--	0.6	--	--
DAIRYLAND	STEALTH-1175	24.5	--	--	67.6	--	--	1.6	--	--
FILLER		24.9	--	--	75.1	--	--	0.5	--	--
FILLER		24.9	--	--	94.2	--	--	0.0	--	--
WOLF RIVER VAL	WRV-9185	25.0	--	--	87.2	--	--	2.2	--	--
DAIRYLAND	STEALTH-1285	25.1	--	--	88.1	--	--	0.0	--	--
DAIRYLAND	STEALTH-1187	25.3	--	--	86.2	--	--	1.1	--	--
PAYCO	253	25.5	--	--	93.3	--	--	0.0	--	--
TERRA	E860	26.0	--	--	91.7	--	--	1.7	--	--
DAIRYLAND	STEALTH-1180	26.3	--	--	91.0	--	--	0.5	--	--
*PIONEER	3921	26.5	25	23	101.4	118	112	0.0	0	0
PICKSEED	2620	26.9	24	--	100.3	108	--	0.0	0	--
JUNG	2386	27.0	--	--	88.1	--	--	0.5	--	--
*PIONEER	3907	27.5	--	--	110.3	--	--	0.6	--	--
DEKALB	DK352	27.9	23	21	91.1	109	117	0.0	0	1
PICKSEED	2621	28.2	25	--	94.7	97	--	0.0	0	--
DEKALB	DK401	28.6	26	--	81.6	99	--	2.2	1	--
DEKALB	DK306	29.1	--	--	98.4	--	--	0.5	--	--
CARGILL	X2497	29.2	--	--	96.5	--	--	1.7	--	--
NORTHROP KING	N2409	29.5	26	25	96.0	113	120	0.0	0	2
TERRA	TR230E	29.5	--	--	87.0	--	--	0.6	--	--
ICI SEEDS	8883	29.6	27	--	96.0	104	--	0.0	0	--
DAIRYLAND	STEALTH-1185	29.7	27	--	82.3	89	--	1.1	1	--
DEKALB	DK381	29.8	26	--	86.7	109	--	0.0	0	--
ICI SEEDS	8954	29.9	26	--	95.0	105	--	1.1	1	--
*PIONEER	3876	30.0	--	--	103.8	--	--	0.0	--	--
*PIONEER	3861	30.2	27	--	103.9	125	--	1.7	1	--
JUNG	2284	30.4	--	--	86.3	--	--	0.5	--	--
VIGORO	V Exp. 830004	30.8	--	--	88.5	--	--	2.7	--	--
CARGILL	2037	31.1	--	--	82.2	--	--	0.0	--	--
PIONEER	3723	32.0	30	28	90.4	103	120	1.1	1	1
PAYCO	3131	32.0	--	--	87.1	--	--	0.0	--	--
AMCORN	PSX3333	32.0	32	--	90.8	98	--	0.6	0	--
VIGORO	V Exp. 830001	32.2	--	--	83.6	--	--	1.6	--	--
AMCORN	PSX1185	32.3	--	--	76.5	--	--	0.5	--	--

(continued next column)

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	YR	YR	1993	YR	YR	1993	YR	YR
RUPP	XR1469	33.4	--	--	79.3	--	--	0.5	--	--
*PIONEER	X1002U	33.7	--	--	102.7	--	--	0.6	--	--
PICKSEED	4990	33.7	32	--	98.6	110	--	0.0	0	--
PAYCO	222	34.7	--	--	84.9	--	--	0.5	--	--
PIONEER	3751	34.9	33	29	97.0	112	118	0.6	0	1
RUPP	XR2319	35.0	32	--	78.0	90	--	0.5	0	--
*PIONEER	3769	35.7	--	--	106.9	--	--	0.0	--	--
FILLER		35.9	--	--	85.1	--	--	1.1	--	--
JUNG	2394	36.9	--	--	86.4	--	--	0.0	--	--
CARGILL	2927	37.2	34	30	93.0	109	111	2.7	2	3
NORTHROP KING	N2879	37.6	33	29	84.1	99	105	0.0	0	2
CIBA	4120	38.3	--	--	91.5	--	--	1.1	--	--
MYCOGEN	3440	39.4	--	--	83.6	--	--	0.6	--	--
PIONEER	3733	39.6	37	33	96.5	103	117	0.6	1	2
RUPP	XR1489	39.8	--	--	87.2	--	--	0.0	--	--
RUPP	XR1505	40.6	37	--	79.6	91	--	0.0	0	--
*JUNG	2496	40.6	37	32	103.1	111	119	0.0	0	2
DAIRYLAND	STEALTH-1198	41.1	--	--	70.9	--	--	0.5	--	--
*CARGILL	3427	41.3	36	32	103.8	109	115	0.0	0	2
*PIONEER	X1032D	42.1	--	--	101.5	--	--	1.1	--	--
JACQUES	4440	43.7	36	--	90.5	110	--	1.1	1	--
AVERAGE		31.9	30	28	90.6	105	115	0.7	0	2
RANGE		24.2	23	21	67.6	89	105	0.0	0	0
		TO	TO	TO	TO	TO	TO	TO	TO	TO
		43.7	37	33	110.3	125	120	2.7	2	3
LEAST SIGNIFICANT DIFFERENCE		1.9			9.8					
COEFFICIENT OF VARIANCE		11.3%								
*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993										

1993
 PLANTED May 10
 HARVESTED November 4
 SOIL TYPE Karlin Sandy Loam
 PREVIOUS CROP Corn
 POPULATION 23,900
 ROW WIDTH 30"
 FERTILIZER 105-51-51
 SOIL TEST: pH 6.6
 P 148 (very high)
 K 248 (high)

1992
 PLANTED April 30
 HARVESTED October 26
 SOIL TYPE Karlin Sandy Loam
 PREVIOUS CROP Alfalfa Sod
 POPULATION 22,000
 ROW WIDTH 30"
 FERTILIZER 77-39-77
 SOIL TEST: pH 7.0
 P 177 (very high)
 K 244 (high)

1991
 PLANTED May 11
 HARVESTED October 8
 SOIL TYPE Karlin Sandy Loam
 PREVIOUS CROP Alfalfa Sod
 POPULATION 24,500
 ROW WIDTH 30"
 FERTILIZER 76-76-76
 SOIL TEST: pH 6.2
 P 196 (very high)
 K 192 (medium)

FARM COOPERATOR: Richard Dennett, Buckley
 COUNTY EXTENSION DIRECTOR: James Wiesing, Traverse City
 EXTENSION AGRICULTURAL AGENT: Erwin Elsner, Traverse City

(continued below)

MENOMINEE COUNTY TRIAL-SILAGE**
ONE, TWO, THREE YEAR AVERAGES - 1993, 1992, 1991

HYBRID (BRAND-VARIETY)		% DRY MATTER		% MOIST	TONS GREEN		PER ACRE	PER ACRE DRY		BUSHELS PER ACRE	% STALK LODGING	
		1993	YR	1991	WEIGHT	2	YR	1993	2	YR	1991	1991
PIONEER	3982	49.0	--	--	8.4	--	4.1	--	--	--	--	
DEKALB	DK306	47.0	--	--	9.5	--	4.5	--	--	--	--	
PIONEER	3907	46.0	--	--	11.3	--	5.2	--	--	--	--	
DAIRYLAND	STEALTH-1185	46.0	39.1	--	12.2	15.6	5.6	5.8	--	--	--	
DAIRYLAND	STEALTH-1175	46.0	--	--	8.5	--	3.9	--	--	--	--	
PICKSEED	2620	46.0	42.2	--	10.0	13.4	4.6	5.5	--	--	--	
JUNG	2386	45.0	--	--	10.2	--	4.6	--	--	--	--	
ICI SEEDS	8883	44.0	37.4	--	12.8	15.6	5.6	5.6	--	--	--	
CARGILL	X2497	44.0	--	--	11.3	--	5.0	--	--	--	--	
DEKALB	DK352	43.0	39.5	19	11.6	14.7	5.0	5.7	97	11	--	
PIONEER	3921	43.0	39.7	23	11.4	14.4	4.9	5.6	127	2	--	
PIONEER	3861	43.0	39.8	--	12.1	15.5	5.2	6.1	--	--	--	
ICI SEEDS	8954	43.0	37.3	--	12.1	15.0	5.2	5.4	--	--	--	
LAND O LAKES	166	43.0	--	--	9.3	--	4.0	--	--	--	--	
MYCOGEN	3440	42.0	--	--	13.5	--	5.7	--	--	--	--	
TERRA	TR230E	42.0	--	--	9.5	--	4.0	--	--	--	--	
JUNG	2284	42.0	--	--	11.8	--	4.9	--	--	--	--	
AMCORN	PSX1185	42.0	--	--	12.9	--	5.4	--	--	--	--	
CIBA	4024	41.0	--	--	9.5	--	3.9	--	--	--	--	
PIONEER	3876	41.0	--	--	13.4	--	5.5	--	--	--	--	
WOLF RIVER VAL	WRV-9185	41.0	--	--	11.8	--	4.8	--	--	--	--	
TERRA	E860	41.0	--	--	12.2	--	5.0	--	--	--	--	
DAIRYLAND	STEALTH-1180	41.0	--	--	10.8	--	4.4	--	--	--	--	
DAIRYLAND	STEALTH-1285	41.0	--	--	9.4	--	3.9	--	--	--	--	
DAIRYLAND	STEALTH-1187	41.0	--	--	12.2	--	5.0	--	--	--	--	
FILLER		41.0	--	--	12.4	--	5.1	--	--	--	--	
PAYCO	253	41.0	--	--	11.9	--	4.9	--	--	--	--	
LAND O LAKES	809	41.0	--	--	9.7	--	4.0	--	--	--	--	
NORTHROP KING	N2409	40.0	38.3	23	12.0	15.6	4.8	5.9	132	11	--	
PIONEER	X1002U	40.0	--	--	12.8	--	5.1	--	--	--	--	
RUPP	XR1469	40.0	--	--	11.5	--	4.6	--	--	--	--	
RUPP	XR2319	40.0	35.1	--	12.8	14.4	5.1	4.9	--	--	--	
PAYCO	3131	40.0	--	--	11.4	--	4.6	--	--	--	--	
LAND O LAKES	144	40.0	--	--	10.3	--	4.1	--	--	--	--	
CIBA	4120	39.0	--	--	12.2	--	4.7	--	--	--	--	

(continued next column)

HYBRID (BRAND-VARIETY)		% DRY MATTER		% MOIST	TONS PER ACRE		ACRE DRY WEIGHT		BUSHEL PER ACRE		% STALK LODGING
		1993	YR	1991	1993	YR	1993	YR	1991	1991	
PIONEER	3769	39.0	--	--	13.9	--	5.4	--	--	--	--
VIGORO	V Exp.830001	39.0	--	--	12.7	--	4.9	--	--	--	--
DAIRYLAND	STEALTH-1198	39.0	--	--	12.9	--	5.0	--	--	--	--
FILLER		39.0	--	--	12.7	--	4.9	--	--	--	--
PICKSEED	2621	39.0	39.5	--	12.4	13.5	4.8	5.3	--	--	--
NORTHROP KING	N2879	38.0	34.6	22	12.8	16.4	4.9	5.5	158	13	--
RUPP	XR1505	38.0	34.0	--	16.1	19.2	6.1	6.4	--	--	--
PICKSEED	4990	38.0	33.7	--	12.6	16.7	4.8	5.4	--	--	--
AMCORN	PSX3333	38.0	33.5	--	11.4	14.9	4.3	4.8	--	--	--
DEKALB	DK401	37.0	33.3	--	12.3	16.8	4.5	5.4	--	--	--
DEKALB	DK381	37.0	32.4	--	15.3	17.1	5.7	5.5	--	--	--
PIONEER	3723	37.0	33.7	25	13.4	18.4	4.9	6.0	150	6	--
CARGILL	3427	37.0	32.9	29	14.0	16.9	5.2	5.4	130	4	--
RUPP	XR1489	37.0	--	--	12.9	--	4.8	--	--	--	--
JUNG	2496	37.0	33.6	29	13.4	17.0	5.0	5.6	123	9	--
FILLER		37.0	--	--	13.1	--	4.9	--	--	--	--
JACQUES	4440	36.0	32.6	--	13.9	16.8	5.0	5.4	--	--	--
PIONEER	3751	36.0	32.1	24	13.5	17.4	4.9	5.4	176	20	--
CARGILL	2037	36.0	--	--	12.4	--	4.5	--	--	--	--
JUNG	2394	36.0	--	--	11.0	--	3.9	--	--	--	--
PAYCO	222	36.0	--	--	11.5	--	4.1	--	--	--	--
VIGORO	V Exp.830004	35.0	--	--	14.7	--	5.1	--	--	--	--
CARGILL	2927	35.0	32.2	23	14.3	17.8	5.0	5.6	137	6	--
PIONEER	X1032D	33.0	--	--	13.5	--	4.5	--	--	--	--
PIONEER	3733	31.0	29.0	25	12.1	20.8	3.7	5.8	123	4	--
AVERAGE		40.1	35.5	24	12.1	16.3	4.8	5.6	135	9	--
RANGE		34.0	29.0	19	8.4	13.4	3.7	4.8	97	2	--
		49.0	42.2	29	16.1	20.8	6.1	6.4	176	20	--

1993
PLANTED May 17
HARVESTED October 4-5
SOIL TYPE Onaway Loam
PREVIOUS CROP Corn
POPULATION 26,300
ROW WIDTH 36"
FERTILIZER 123-30-30
SOIL TEST: pH 7.3
P 97 (high)
K 168 (medium)

1992
PLANTED May 11
HARVESTED October 7
SOIL TYPE Onaway Loam
PREVIOUS CROP Corn
POPULATION 32,000
ROW WIDTH 34"
FERTILIZER 123-22-134+15 tons manure
SOIL TEST: pH 7.3
P 97 (high)
K 168 (medium)

1991
PLANTED May 13
HARVESTED October 16-17
SOIL TYPE Onaway Loam
PREVIOUS CROP Corn
POPULATION 27,800
ROW WIDTH 34"
FERTILIZER 122-30-30
SOIL TEST: pH 7.3
P 97 (high)
K 168 (medium)

FARM COOPERATOR: Steve Berzsenyi, Stephenson
MSU COOPERATORS: James Lempke and Dr. Richard Leep, Department Crop & Soil Sciences, Marquette
COUNTY EXTENSION DIRECTOR: Michael Erdman, Stephenson

** Late maturing corn made silage harvest the better option for yield results in 1993, 1992.

TABLE 16

NORTHERN MICHIGAN

ZONE 4

AVERAGE OF ALPENA, GRAND TRAVERSE & MENOMINEE COUNTY TRIALS
ONE, TWO, THREE YEAR AVERAGES - 1993, 1992, 1991

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR
CIBA	4024	24.1	--	--	87.3	--	--	5.5	--	--
WOLF RIVER VAL	WRV-9185	26.5	--	--	90.9	--	--	2.3	--	--
DAIRYLAND	STEALTH-1285	27.2	--	--	95.9	--	--	1.0	--	--
*PAYCO	253	27.9	--	--	98.1	--	--	1.1	--	--
FILLER		27.9	--	--	94.9	--	--	0.3	--	--
*DEKALB	DK306	28.0	--	--	104.8	--	--	1.6	--	--
DAIRYLAND	STEALTH-1175	28.1	--	--	74.6	--	--	2.5	--	--
PICKSEED	2620	28.2	28	--	97.6	104	--	1.1	1	--
FILLER		28.3	--	--	79.1	--	--	1.6	--	--
*PIONEER	3907	28.7	--	--	115.8	--	--	0.6	--	--
TERRA	TR230E	28.7	--	--	87.5	--	--	0.6	--	--
*PIONEER	3921	28.9	29	27	106.3	120	117	0.0	1	1
*TERRA	E860	28.9	--	--	98.6	--	--	2.1	--	--
PICKSEED	2621	29.2	29	--	96.0	100	--	1.7	3	--
DAIRYLAND	STEALTH-1180	29.3	--	--	87.6	--	--	1.7	--	--
DAIRYLAND	STEALTH-1187	29.4	--	--	88.6	--	--	0.8	--	--
DEKALB	DK401	30.1	31	--	88.9	106	--	1.7	1	--
*NORTHROP KING	N2409	30.7	31	28	100.6	114	116	1.1	1	3
JUNG	2386	30.9	--	--	84.5	--	--	1.4	--	--
DEKALB	DK352	31.0	29	26	92.4	106	106	0.3	1	2
JUNG	2284	31.0	--	--	89.1	--	--	1.1	--	--
DAIRYLAND	STEALTH-1185	31.3	30	--	87.2	96	--	1.1	1	--
*PIONEER	3861	31.5	32	--	103.6	116	--	1.1	2	--
DEKALB	DK381	31.7	31	--	90.8	106	--	1.2	1	--
*CARGILL	X2497	31.7	--	--	103.9	--	--	0.9	--	--
*ICI SEEDS	8954	32.0	31	--	99.4	107	--	1.1	2	--
*ICI SEEDS	8883	32.6	32	--	102.1	109	--	1.1	1	--
*PIONEER	3876	32.8	--	--	104.7	--	--	0.6	--	--
VIGORO	KE Exp.830004	33.0	--	--	92.2	--	--	2.2	--	--
VIGORO	KE Exp.830001	33.7	--	--	92.0	--	--	2.0	--	--
CARGILL	2037	33.9	--	--	84.6	--	--	0.3	--	--
PAYCO	222	34.0	--	--	89.4	--	--	1.7	--	--
AMCORN	PSX1185	34.1	--	--	80.4	--	--	0.3	--	--
*PIONEER	X1002U	34.4	--	--	103.5	--	--	1.7	--	--
*PICKSEED	4990	34.5	35	--	100.0	110	--	0.0	0	--

HYBRID (BRAND-VARIETY)		% MOISTURE			BUSHEL PER ACRE			% STALK LODGING		
		1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR
AMCORN	PSX3333	34.5	35	--	91.1	95	--	0.9	3	--
PAYCO	3131	35.5	--	--	76.5	--	--	0.0	--	--
RUPP	XR1469	35.6	--	--	75.8	--	--	0.9	--	--
*PIONEER	3723	35.9	36	33	93.2	104	115	0.8	1	2
*PIONEER	3769	36.8	--	--	103.7	--	--	0.6	--	--
RUPP	XR2319	37.4	36	--	75.5	89	--	0.5	1	--
PIONEER	3751	37.8	37	34	97.5	113	122	1.7	2	4
FILLER		38.1	--	--	92.0	--	--	0.8	--	--
CIBA	4120	38.2	--	--	97.8	--	--	1.4	--	--
NORTHROP KING	N2879	38.2	37	32	88.0	103	112	0.8	2	5
CARGILL	2927	38.8	38	34	93.7	104	108	1.9	2	3
PIONEER	3733	39.2	38	34	95.0	102	112	1.1	2	2
JUNG	2394	39.2	--	--	84.4	--	--	0.9	--	--
RUPP	XR1489	41.4	--	--	75.6	--	--	0.6	--	--
MYCOGEN	3440	41.6	--	--	82.1	--	--	0.3	--	--
*JUNG	2496	42.3	39	36	101.0	110	112	1.5	2	4
*CARGILL	3427	43.0	40	37	102.0	109	113	0.6	1	2
*JACQUES	4440	43.1	39	--	98.1	110	--	1.1	1	--
DAIRYLAND	STEALTH-1198	43.6	--	--	69.5	--	--	0.3	--	--
RUPP	XR1505	43.9	40	--	70.7	87	--	0.0	0	--
PIONEER	X1032D	44.9	--	--	93.3	--	--	0.8	--	--
AVERAGE		33.8	34	32	92.0	105	113	1.1	1	3
RANGE		24.1	28	26	69.5	87	106	0.0	0	1
		44.9	40	37	115.8	120	122	5.5	3	5
LEAST SIGNIFICANT DIFFERENCE		1.5			6.1					
COEFFICIENT OF VARIANCE		9.9%								

*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1993

(continued next column)

TABLE 17

SOUTH CENTRAL MICHIGAN

KENT COUNTY TRIAL-SILAGE

ONE, TWO YEAR AVERAGE-1993, 1992

ZONE 2

EARLY TRIAL (106 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% DRY MATTER		TONS PER ACRE		DRY WEIGHT		% DMD		QUALITY ANALYSES				% CP	
		2		2		2		2		% FD		% NDF		2	
		1993	YR	1993	YR	1993	YR	1993	YR	1993	YR	1993	YR	1993	YR
FILLER		41.4	--	19.8	--	8.2	--	75.6	--	41.2	--	41.6	--	7.63	--
GREAT LAKES	GL450	38.6	43.5	22.0	20.0	8.5	8.6	75.2	76	44.1	44	44.8	43	8.14	7.5
NORTHROP KING	N2933	36.2	--	17.9	--	6.5	--	73.2	--	40.8	--	45.2	--	8.24	--
PIONEER	3769	35.0	--	23.2	--	8.1	--	75.1	--	44.0	--	44.4	--	7.74	--
CALLAHAN	C7245	34.5	41.0	22.5	19.7	7.8	7.9	75.2	76	43.7	45	44.0	44	7.65	7.2
AMCORN	PSX3333	34.4	41.4	20.7	18.6	7.1	7.5	73.4	74	42.2	42	46.1	45	8.66	7.9
FILLER		33.9	--	20.9	--	7.1	--	--	--	--	--	--	--	--	--
PIONEER	3723	33.8	38.3	22.3	19.8	7.5	7.4	76.3	76	44.4	44	42.7	43	8.27	7.8
NORTHROP KING	N2899	33.0	--	21.7	--	7.2	--	75.2	--	44.4	--	44.6	--	8.18	--
FILLER		33.0	--	21.7	--	7.2	--	--	--	--	--	--	--	--	--
HYPERFORMER	HY9334	32.1	--	24.0	--	7.7	--	76.7	--	45.6	--	42.8	--	8.50	--
CROW'S	375	31.9	--	24.9	--	7.9	--	75.1	--	42.5	--	43.2	--	8.05	--
AMCORN	PSX5757	31.5	--	23.3	--	7.3	--	75.7	--	43.3	--	43.0	--	7.47	--
DEKALB	DK512	31.4	--	25.4	--	8.0	--	76.0	--	45.8	--	44.3	--	8.00	--
DEKALB	DK485	31.3	40.0	23.1	20.4	7.2	7.8	75.2	76	44.7	43	44.8	42	8.10	7.6
DAIRYLAND	STEALTH-1198	31.1	--	22.5	--	7.0	--	75.7	--	46.7	--	45.6	--	8.11	--
PIONEER	3751	31.0	38.1	24.0	20.3	7.4	7.4	76.2	77	43.5	45	42.1	42	8.36	7.8
FILLER		30.1	--	23.6	--	7.1	--	--	--	--	--	--	--	--	--
GREAT LAKES	GL496	29.9	36.0	24.7	22.4	7.4	7.9	74.2	75	43.4	42	45.5	44	8.32	7.9
CIBA	4372	29.8	--	26.9	--	8.0	--	75.7	--	43.6	--	43.1	--	7.69	--
GREAT LAKES	GL559	29.3	34.3	26.4	24.1	7.8	8.2	77.1	77	43.6	44	40.5	40	8.57	7.9
PIONEER	3573	29.2	35.6	27.2	24.5	8.0	8.6	76.4	77	43.8	44	42.0	41	7.79	7.2
GREAT LAKES	GL536	28.7	34.2	27.4	24.7	7.9	8.3	77.0	76	43.7	44	40.8	43	8.61	8.0
PIONEER	3515	27.9	33.6	27.7	24.8	7.7	8.2	75.1	75	44.5	46	44.8	46	7.99	7.5
DAIRYLAND	STEALTH-1205	27.9	--	26.4	--	7.4	--	76.5	--	47.7	--	44.8	--	8.12	--
CROW'S	210	27.9	35.9	25.5	21.7	7.1	7.5	76.1	76	49.3	48	47.2	47	8.02	7.8
DAIRYLAND	STEALTH-1208	26.4	--	26.4	--	7.0	--	76.9	--	47.4	--	43.9	--	7.84	--
DEKALB	DK554	26.2	--	27.2	--	7.1	--	74.1	--	43.1	--	45.5	--	8.26	--
CARGILL	5327	24.9	--	27.5	--	6.8	--	75.9	--	44.3	--	43.3	--	7.69	--
PIONEER	3525	23.7	28.9	33.2	30.3	7.9	8.6	76.5	74	47.2	45	44.4	47	8.28	7.2
AVERAGE		31.2	37.0	24.3	22.4	7.5	8.0	75.5	76	44.3	44	43.9	44	8.08	7.6
RANGE		23.7	28.9	17.9	18.6	6.5	7.4	73.2	74	40.8	42	40.5	40	7.47	7.2
		TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
		41.4	43.5	33.2	30.3	8.5	8.6	77.1	77	49.3	48	47.2	47	8.66	8.0

DMD = DRY MATTER DIGESTABILITY (higher percentage means greater energy content)
 FD = FIBER DIGESTABILITY (the measure of the degree of fermentation of fiber, high FD is desirable)
 NDF = NEUTRAL DETERGENT FIBER (the measure of fiber content, higher levels mean lower energy)
 CP = CRUDE PROTEIN (higher protein levels require less supplementation)

(continued below)

LATE TRIAL (107 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		TONS PER ACRE						QUALITY ANALYSES							
		% DRY MATTER		GREEN WEIGHT		DRY WEIGHT		% DMD		% FD		% NDF		% CP	
		1993	YR	1993	YR	1993	YR	1993	YR	1993	YR	1993	YR	1993	YR
HYPERFORMER	HY9424	35.1	--	25.5	--	8.9	--	75.3	--	44.9	--	44.8	--	7.63	--
CIBA	4394	32.8	--	26.1	--	8.6	--	74.3	--	40.9	--	43.5	--	6.92	--
GREAT LAKES	GL583	31.7	32.2	26.2	25.4	8.3	8.1	78.6	77	47.7	48	40.8	44	7.62	7.4
CALLAHAN	C7252	30.6	34.5	27.7	25.2	8.5	8.6	76.6	77	47.3	47	44.4	44	7.42	7.2
DEKALB	DK580	30.5	--	26.3	--	8.0	--	77.1	--	49.8	--	45.6	--	7.82	--
DEKALB	DK591	30.2	--	29.8	--	9.0	--	75.4	--	45.2	--	44.9	--	7.85	--
RENK	RK886	29.8	31.4	28.9	28.1	8.6	8.8	77.7	77	45.4	46	41.0	43	7.39	7.3
ICI SEEDS	8501	29.7	--	26.8	--	8.0	--	76.6	--	47.8	--	44.9	--	7.91	--
AMCORN	PSX0020	29.5	--	27.0	--	7.9	--	78.0	--	48.8	--	43.1	--	8.08	--
CROW'S	401	29.1	--	26.4	--	7.7	--	77.2	--	47.1	--	43.1	--	7.74	--
GOLDEN HARVEST	EX 552	29.1	--	26.0	--	7.6	--	76.8	--	47.3	--	43.9	--	7.54	--
HYPERFORMER	HY9487	29.0	--	27.0	--	7.8	--	75.2	--	47.3	--	47.0	--	7.31	--
CALLAHAN	C7258	28.9	--	27.0	--	7.8	--	77.2	--	47.9	--	43.8	--	7.87	--
DAIRYLAND	DX-1110	28.7	--	25.1	--	7.2	--	75.6	--	46.7	--	45.8	--	7.81	--
CALLAHAN	C7353	28.7	--	28.9	--	8.3	--	77.7	--	48.2	--	43.0	--	7.42	--
PIONEER	3394	28.6	30.1	31.4	30.1	9.0	9.1	77.1	76	45.6	46	42.1	45	7.60	7.2
ICI SEEDS	8513	28.6	--	28.4	--	8.0	--	76.4	--	46.7	--	44.3	--	7.56	--
ICI SEEDS	8543	28.4	30.4	27.7	25.4	7.9	7.7	77.6	77	47.7	48	42.9	45	7.30	7.4
RENK	RK812	27.9	31.9	26.1	25.4	7.2	8.0	75.9	76	47.3	46	45.8	44	7.76	7.4
AMCORN	PSX9292	27.9	33.3	26.8	24.9	7.4	8.1	76.8	77	47.8	48	44.4	44	7.62	7.4
PIONEER	3357	27.8	31.2	26.9	25.3	7.5	7.8	77.0	76	49.2	48	45.3	46	7.91	7.3
CALLAHAN	C7259	27.5	--	28.0	--	7.7	--	74.5	--	49.2	--	50.3	--	8.49	--
CARGILL	6227	27.0	31.4	25.7	24.5	6.9	7.6	76.3	76	46.3	48	44.2	46	7.12	7.1
CROW'S	SL45	26.1	--	29.2	--	7.6	--	74.0	--	46.1	--	48.2	--	8.06	--
CARGILL	X6208	25.7	--	28.9	--	7.5	--	76.5	--	44.7	--	42.6	--	7.73	--
AVERAGE		29.2	31.8	27.4	26.0	8.0	8.2	76.5	77	46.9	47	44.4	45	7.66	7.3
RANGE		25.7	30.1	25.1	24.5	6.9	7.6	74.0	76	40.9	46	40.8	43	6.92	7.1
		35.1	34.5	31.4	30.1	9.0	9.1	78.6	77	49.8	48	50.3	46	8.49	7.4

1993
PLANTED May 10
HARVESTED September 25, October 1
SOIL TYPE Spinks Loamy Sand
PREVIOUS CROP Corn
POPULATION 27,500
ROW WIDTH 30"
FERTILIZER 172-0-0
SOIL TEST: pH 5.9
P 122 (very high)
K 695 (very high)

1992
PLANTED May 5
HARVESTED October 7, 12
SOIL TYPE Spinks Loamy Sand
PREVIOUS CROP Corn
POPULATION 25,200
ROW WIDTH 30"
FERTILIZER 192-0-0+manure
SOIL TEST: pH 6.8
P 138 (very high)
K 457 (very high)

FARM COOPERATOR: Gerald Kayser, Caledonia

MSU COOPERATORS: Dr. Micheal Allen and David Main, Animal Science Department, East Lansing

COUNTY EXTENSION DIRECTOR: William Harrison, Grand Rapids

EXTENSION AGRICULTURAL AGENT: William Steenwyk, Grand Rapids

TABLE 18

SOUTH CENTRAL MICHIGAN

ZONE 2

 INGHAM COUNTY TRIAL-SILAGE
 ONE, TWO, THREE YEAR AVERAGES -1993, 1992, 1991

EARLY TRIAL (106 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		TONS PER ACRE									QUALITY ANALYSES											
		% DRY MATTER			GREEN WEIGHT			DRY WEIGHT			% DMD			% FD			% NDF			% CP		
		1993	2	3	1993	2	3	1993	2	3	1993	2	3	1993	2	3	1993	2	3	1993	2	3
		VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR
HYPERFORMER	HY9334	48.7	--	--	17.4	--	--	8.5	--	--	77.1	--	--	45.8	--	--	42.2	--	--	8.07	--	--
FILLER		44.0	--	--	17.6	--	--	7.7	--	--	79.2	--	--	50.2	--	--	41.7	--	--	7.13	--	--
NORTHRUP KING	N2933	43.7	--	--	16.6	--	--	7.2	--	--	74.6	--	--	42.5	--	--	44.1	--	--	7.80	--	--
DAIRYLAND	STEALTH-1198	41.0	--	--	19.9	--	--	8.1	--	--	76.9	--	--	44.9	--	--	41.9	--	--	7.21	--	--
AMCORN	PSX3333	40.8	39.9	--	18.2	18.8	--	7.4	7.5	--	74.9	75	--	44.2	43	--	44.9	44	--	7.86	7.8	--
DEKALB	DK554	40.2	--	--	22.4	--	--	9.0	--	--	76.0	--	--	46.4	--	--	44.8	--	--	7.18	--	--
GREAT LAKES	GL450	39.8	39.6	--	19.6	19.7	--	7.8	7.8	--	78.2	78	--	46.3	46	--	40.5	40	--	6.93	7.1	--
PIONEER	3751	39.0	38.7	39.2	20.4	19.1	17.3	7.9	7.4	6.8	76.8	76	76	44.9	43	45	42.1	42	44	7.51	7.7	8.1
FILLER		38.5	--	--	20.0	--	--	7.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FILLER		38.3	--	--	20.2	--	--	7.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PIONEER	3723	38.1	38.6	38.5	20.2	19.5	19.1	7.7	7.5	7.3	77.0	77	74	46.0	45	44	42.6	42	47	7.60	7.4	7.7
PIONEER	3769	37.5	--	--	18.7	--	--	7.0	--	--	74.7	--	--	42.6	--	--	44.0	--	--	7.52	--	--
CALLAHAN	C7245	37.5	39.1	--	20.3	19.5	--	7.6	7.6	--	79.2	78	--	47.7	47	--	39.7	42	--	7.01	6.9	--
DEKALB	DK485	36.5	37.2	--	19.9	20.4	--	7.3	7.6	--	77.2	76	--	44.1	44	--	40.7	42	--	7.11	7.0	--
CIBA	4372	36.2	--	--	22.1	--	--	8.0	--	--	76.0	--	--	44.4	--	--	43.2	--	--	6.84	--	--
NORTHRUP KING	N2899	36.2	--	--	17.9	--	--	6.5	--	--	77.3	--	--	41.1	--	--	38.6	--	--	7.94	--	--
CROW'S	375	35.6	--	--	21.9	--	--	7.8	--	--	78.2	--	--	48.2	--	--	42.1	--	--	7.25	--	--
FILLER		35.5	--	--	22.6	--	--	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AMCORN	PSX5757	35.0	--	--	21.3	--	--	7.5	--	--	78.4	--	--	46.9	--	--	40.7	--	--	7.12	--	--
GREAT LAKES	GL496	34.9	35.3	36.7	21.7	21.1	20.5	7.6	7.4	7.5	76.9	77	--	46.6	47	--	43.2	42	--	7.78	7.4	--
GREAT LAKES	GL536	34.7	36.3	--	23.7	23.1	--	8.2	8.3	--	76.4	77	--	44.9	46	--	42.9	43	--	7.99	7.9	--
PIONEER	3515	34.3	35.7	--	23.3	21.7	--	8.0	7.7	--	75.8	75	--	42.6	42	--	42.2	42	--	7.19	7.0	--
DAIRYLAND	STEALTH-1205	34.0	--	--	25.7	--	--	8.7	--	--	76.7	--	--	47.4	--	--	44.3	--	--	7.57	--	--
DAIRYLAND	STEALTH-1208	34.0	--	--	21.8	--	--	7.4	--	--	78.6	--	--	48.0	--	--	41.1	--	--	8.01	--	--
PIONEER	3573	33.7	34.9	35.5	24.7	22.9	21.5	8.3	7.9	7.6	78.3	78	77	48.4	46	47	42.1	41	43	7.44	7.3	7.3
GREAT LAKES	GL559	33.5	33.5	--	23.9	23.5	--	8.0	7.8	--	78.9	78	--	48.2	49	--	40.8	43	--	7.77	7.3	--
CROW'S	210	33.0	32.9	--	21.5	20.9	--	7.1	6.8	--	78.7	77	--	49.1	46	--	41.9	42	--	7.94	7.4	--
DEKALB	DK512	32.8	--	--	22.9	--	--	7.5	--	--	76.8	--	--	45.3	--	--	42.4	--	--	6.79	--	--
CARGILL	5327	32.0	--	--	25.8	--	--	8.2	--	--	72.6	--	--	35.8	--	--	42.8	--	--	7.70	--	--
PIONEER	3525	28.0	30.7	--	30.1	27.9	--	8.4	8.5	--	75.5	75	--	43.4	43	--	43.4	43	--	7.02	6.4	--
AVERAGE		36.9	36.3	37.5	21.4	21.4	19.6	7.8	7.7	7.3	76.9	77	76	45.4	45	45	42.3	42	44	7.45	7.3	7.7
RANGE		28.0	30.7	35.5	16.6	18.8	17.3	6.5	6.8	6.8	72.6	75	74	35.8	42	44	38.6	40	43	6.79	6.4	7.3
		TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
		48.7	39.9	39.2	30.1	27.9	21.5	9.0	8.5	7.6	79.2	78	77	49.1	49	47	44.9	44	47	8.07	7.9	8.1

DMD = DRY MATTER DIGESTABILITY (higher percentage means greater energy content)
 FD = FIBER DIGESTABILITY (the measure of the degree of fermentation of fiber, high FD is desirable)
 NDF = NEUTRAL DETERGENT FIBER (the measure of fiber content, higher levels mean lower energy)
 CP = CRUDE PROTEIN (higher protein levels require less supplementation)

(continued below)

LATE TRIAL (107 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		TONS PER ACRE									QUALITY ANALYSES											
		% DRY MATTER			GREEN WEIGHT			DRY WEIGHT			% DMD			% FD			% NDF			% CP		
		1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR
CROW'S	SL45	38.8	--	--	20.8	--	--	8.0	--	--	74.8	--	--	45.2	--	--	45.9	--	--	6.72	--	--
ICI SEEDS	8543	37.7	37.2	--	20.5	21.6	--	7.7	8.0	--	76.5	77	--	45.7	46	--	43.2	43	--	6.89	6.8	--
HYPERFORMER	HY9424	36.8	--	--	23.7	--	--	8.7	--	--	78.5	--	--	46.7	--	--	40.3	--	--	7.33	--	--
CALLAHAN	C7252	36.8	38.0	--	22.0	22.9	--	8.1	8.7	--	77.5	77	--	45.1	46	--	41.0	42	--	6.41	6.2	--
CIBA	4394	35.9	--	--	25.5	--	--	9.1	--	--	76.3	--	--	44.6	--	--	42.8	--	--	6.46	--	--
DEKALB	DK580	35.8	--	--	21.5	--	--	7.7	--	--	76.5	--	--	46.5	--	--	43.9	--	--	6.91	--	--
DAIRYLAND	DX-1110	35.1	--	--	22.9	--	--	8.0	--	--	77.9	--	--	49.9	--	--	44.0	--	--	6.53	--	--
ICI SEEDS	8501	34.9	--	--	23.7	--	--	8.3	--	--	77.7	--	--	47.5	--	--	42.6	--	--	6.93	--	--
CROW'S	401	34.6	--	--	23.8	--	--	8.2	--	--	77.8	--	--	47.2	--	--	42.0	--	--	6.54	--	--
RENK	RK812	34.4	34.2	--	25.2	25.0	--	8.6	8.5	--	77.6	76	--	45.6	45	--	41.1	44	--	6.62	6.4	--
GOLDEN HARVEST	EX 552	34.3	--	--	24.8	--	--	8.4	--	--	77.7	--	--	47.8	--	--	42.7	--	--	6.47	--	--
GREAT LAKES	GL583	34.1	35.1	39.6	23.3	24.1	22.4	7.9	8.4	8.5	77.7	77	--	45.4	43	--	40.9	40	--	6.41	6.4	--
CARGILL	6227	34.1	36.0	--	22.4	23.3	--	7.6	8.4	--	77.3	77	--	45.5	46	--	41.6	42	--	6.43	6.4	--
CALLAHAN	C7353	34.0	--	--	22.9	--	--	7.8	--	--	78.3	--	--	47.8	--	--	41.6	--	--	6.49	--	--
HYPERFORMER	HY9487	33.7	--	--	24.9	--	--	8.4	--	--	76.7	--	--	47.5	--	--	44.3	--	--	6.78	--	--
AMCORN	PSX9292	33.2	35.0	36.9	23.4	23.5	21.5	7.7	8.2	8.0	78.6	78	77	50.2	49	48	42.9	44	44	6.43	6.4	6.4
ICI SEEDS	8513	33.1	--	--	23.6	--	--	7.8	--	--	75.9	--	--	41.5	--	--	41.2	--	--	6.52	--	--
DEKALB	DK591	32.4	--	--	26.1	--	--	8.4	--	--	74.7	--	--	42.2	--	--	43.7	--	--	7.12	--	--
PIONEER	3357	32.3	34.7	38.5	23.6	22.7	21.4	7.6	7.8	8.1	78.2	77	77	52.1	49	48	45.6	44	43	7.32	6.8	6.6
AMCORN	PSX0020	32.3	--	--	25.3	--	--	8.1	--	--	77.7	--	--	47.9	--	--	42.8	--	--	6.27	--	--
CALLAHAN	C7258	32.1	--	--	26.2	--	--	8.4	--	--	77.6	--	--	49.1	--	--	44.0	--	--	6.64	--	--
RENK	RK886	31.3	32.0	--	25.9	26.9	--	8.1	8.6	--	76.2	76	--	45.0	46	--	43.2	45	--	6.45	6.4	--
CARGILL	X6208	31.2	--	--	26.2	--	--	8.2	--	--	77.4	--	--	46.6	--	--	42.4	--	--	6.78	--	--
CALLAHAN	C7259	30.6	--	--	26.2	--	--	8.0	--	--	77.2	--	--	47.2	--	--	43.2	--	--	7.52	--	--
PIONEER	3394	30.1	31.5	35.5	25.6	25.3	22.9	7.7	7.9	7.9	76.2	74	74	42.7	42	43	41.6	44	45	6.43	6.4	6.4
AVERAGE		34.0	34.9	37.6	24.0	23.9	22.1	8.1	8.3	8.1	77.1	77	76	46.5	46	46	42.7	43	44	6.70	6.5	6.5
RANGE		30.1 TO	31.5 TO	35.5 TO	20.5 TO	21.6 TO	21.4 TO	7.6 TO	7.8 TO	7.9 TO	74.7 TO	74 TO	74 TO	41.5 TO	42 TO	43 TO	40.3 TO	40 TO	43 TO	6.27 TO	6.2 TO	6.4 TO
		38.8	38.0	39.6	26.2	26.9	22.9	9.1	8.7	8.5	78.6	78	77	52.1	49	48	45.9	45	45	7.52	6.8	6.6

1993
 PLANTED May 8
 HARVESTED September 13, 24
 SOIL TYPE Capac Loam
 PREVIOUS CROP Soybeans
 POPULATION 27,500
 ROW WIDTH 30"
 FERTILIZER 168-28-28
 SOIL TEST:pH 6.4
 P 104 (very high)
 K 160 (medium)

1992
 PLANTED May 4
 HARVESTED October 6,12
 SOIL TYPE Capac Loam
 PREVIOUS CROP Soybeans
 POPULATION 24,800
 ROW WIDTH 30"
 FERTILIZER 148-38-68
 SOIL TEST:pH 6.4
 P 113 (very high)
 K 227 (high)

1991
 PLANTED May 5
 HARVESTED September 6,16
 SOIL TYPE Capac Loam
 PREVIOUS CROP Soybeans
 POPULATION 24,900
 ROW WIDTH 30"
 FERTILIZER 165-50-50
 SOIL TEST:pH 6.8
 P 54 (medium)
 K 133 (low)

FARM COOPERATOR: Michigan State University, East Lansing
 MSU COOPERATORS: Dr. Michael Allen and David Main, Animal Science Department, East Lansing
 COUNTY EXTENSION DIRECTOR: Joseph Lessard, Mason
 EXTENSION AGRICULTURAL AGENTS: John Knorek and Laura Rhodes, Mason

TABLE 19

NORTH CENTRAL MICHIGAN

ZONE 3

 HURON COUNTY TRIAL-SILAGE
 ONE, TWO, THREE YEAR AVERAGES-1993, 1992, 1991

EARLY TRIAL (106 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		TONS PER ACRE									QUALITY ANALYSES											
		% DRY MATTER			GREEN WEIGHT			DRY WEIGHT			% DMD			% FD			% NDF			% CP		
		1993	2	3	1993	2	3	1993	2	3	1993	2	3	1993	2	3	1993	2	3	1993	2	3
FILLER		49.6	--	--	14.8	--	--	7.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HYPERFORMER	HY9334	48.7	--	--	16.6	--	--	8.1	--	--	78.4	--	--	45.4	--	--	39.5	--	--	7.51	--	--
NORTHRUP KING	N2933	47.8	--	--	15.4	--	--	7.4	--	--	77.3	--	--	43.4	--	--	40.1	--	--	7.24	--	--
FILLER		46.2	--	--	14.0	--	--	6.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FILLER		44.8	--	--	18.6	--	--	8.3	--	--	79.8	--	--	48.8	--	--	37.2	--	--	6.23	--	--
AMCORN	PSX3333	44.3	42.8	--	15.6	16.8	--	6.9	7.1	--	75.4	73	--	40.3	43	--	41.2	47	--	7.64	7.3	--
PIONEER	3769	43.6	--	--	15.9	--	--	7.0	--	--	78.9	--	--	44.0	--	--	37.7	--	--	6.79	--	--
PIONEER	3751	43.2	42.4	43.3	16.8	18.2	18.9	7.3	7.7	8.2	78.9	77	76	47.5	47	49	40.2	44	46	7.38	7.1	7.1
PIONEER	3723	42.6	39.2	40.8	17.5	18.7	18.3	7.5	7.3	7.4	78.1	77	77	46.6	48	49	41.1	45	45	7.32	7.0	6.8
DAIRYLAND	STEALTH-1198	42.1	--	--	17.3	--	--	7.3	--	--	78.1	--	--	48.3	--	--	42.3	--	--	7.16	--	--
NORTHRUP KING	N2899	41.8	--	--	16.4	--	--	6.9	--	--	78.5	--	--	47.5	--	--	41.0	--	--	7.61	--	--
GREAT LAKES	GL450	41.2	39.5	41.9	17.9	18.7	18.9	7.4	7.4	7.9	78.5	76	77	48.0	46	48	41.4	44	44	6.74	6.6	6.6
DEKALB	DK485	38.8	35.2	38.4	20.1	20.8	20.6	7.8	7.3	7.9	77.9	76	--	45.3	44	--	40.4	43	--	7.05	6.9	--
CIBA	4372	37.8	--	--	20.4	--	--	7.7	--	--	76.4	--	--	46.3	--	--	43.9	--	--	6.78	--	--
CROW'S	375	37.5	--	--	18.3	--	--	6.9	--	--	77.6	--	--	45.1	--	--	40.8	--	--	6.65	--	--
AMCORN	PSX5757	37.5	--	--	18.8	--	--	7.0	--	--	76.4	--	--	43.8	--	--	42.0	--	--	6.85	--	--
FILLER		36.8	--	--	18.9	--	--	6.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PIONEER	3573	36.8	32.8	35.4	23.2	24.7	23.0	8.6	8.0	8.0	78.2	76	76	48.2	48	48	42.0	46	46	6.95	6.6	6.6
CALLAHAN	C7245	36.4	36.9	--	17.5	17.4	--	6.4	6.4	--	78.2	77	--	47.4	47	--	41.4	45	--	6.75	6.8	--
GREAT LAKES	GL559	35.6	32.1	--	21.9	22.9	--	7.8	7.3	--	77.6	76	--	46.5	49	--	41.9	48	--	7.14	7.1	--
DEKALB	DK554	35.5	--	--	20.8	--	--	7.4	--	--	76.6	--	--	47.4	--	--	44.5	--	--	6.99	--	--
GREAT LAKES	GL496	35.5	34.5	37.2	20.8	21.8	21.8	7.4	7.5	8.1	77.1	76	75	45.7	47	48	42.2	46	47	7.17	7.1	7.0
DEKALB	DK512	35.4	--	--	20.5	--	--	7.3	--	--	77.7	--	--	46.0	--	--	41.2	--	--	6.56	--	--
GREAT LAKES	GL536	35.4	32.2	--	20.1	22.2	--	7.1	7.1	--	78.3	77	--	50.0	51	--	43.4	46	--	7.13	7.5	--
DAIRYLAND	STEALTH-1205	35.3	--	--	21.6	--	--	7.6	--	--	76.6	--	--	44.1	--	--	41.8	--	--	7.03	--	--
CROW'S	210	34.1	32.4	--	19.2	21.0	--	6.6	6.8	--	78.2	76	--	48.1	49	--	42.0	46	--	7.39	7.2	--
DAIRYLAND	STEALTH-1208	32.7	--	--	21.8	--	--	7.1	--	--	77.7	--	--	46.8	--	--	42.0	--	--	6.89	--	--
PIONEER	3515	32.6	36.3	--	22.7	21.1	--	7.4	7.6	--	78.0	76	--	48.1	45	--	42.4	44	--	7.04	6.6	--
CARGILL	5327	31.9	--	--	22.1	--	--	7.0	--	--	77.9	--	--	48.0	--	--	42.4	--	--	7.33	--	--
PIONEER	3525	28.6	32.8	--	25.7	23.1	--	7.4	7.5	--	76.1	74	--	42.6	44	--	41.6	47	--	6.35	6.2	--
AVERAGE		39.0	36.1	39.5	19.0	20.6	20.3	7.3	7.3	7.9	77.7	76	76	46.3	47	48	41.4	45	46	7.02	6.9	6.8
RANGE		28.6	32.1	35.4	14.0	16.8	18.3	6.4	6.4	7.4	75.4	74	75	40.3	43	48	37.7	43	44	6.35	6.2	6.6
		TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TP	TO	TO	TO	TO	TO	TO	TO	TO
		49.6	42.8	43.3	25.7	24.7	23.0	8.6	8.0	8.2	78.9	77	77	50.0	51	49	44.5	48	47	7.64	7.3	7.1

DMD = DRY MATTER DIGESTIBILITY (higher percentage means greater energy content)

FD = FIBER DIGESTIBILITY (the measure of the degree of fermentation of fiber, high FD is desirable)

NDF = NEUTRAL DETERGENT FIBER (the measure of fiber content, higher levels mean lower energy)

CP = CRUDE PROTEIN (higher protein levels require less supplementation)

(continued below)

LATE TRIAL (107 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% DRY MATTER			TONS PER ACRE			QUALITY ANALYSES			% CP		
		GREEN WEIGHT			DRY WEIGHT			% DMD			% FD		
		1993	2	3	1993	2	3	1993	2	3	1993	2	3
		1993	YR	YR	1993	YR	YR	1993	YR	YR	1993	YR	YR
ICI SEEDS	8543	45.4	40.7	--	19.4	19.6	--	8.8	8.0	--	74.5	74	--
DEKALB	DK580	43.4	--	--	18.4	--	--	8.0	--	--	45.1	--	--
HYPERFORMER	HY9424	42.2	--	--	20.9	--	--	8.9	--	--	42.5	--	--
CALLAHAN	C7252	42.2	40.1	--	18.3	19.0	--	7.7	7.6	--	46.9	48	--
DAIRYLAND	DX-1110	42.0	--	--	20.1	--	--	8.4	--	--	47.6	--	--
CIBA	4394	41.5	--	--	19.3	--	--	8.0	--	--	43.2	--	--
AMCORN	PSX9292	41.5	37.8	--	20.6	20.3	--	8.5	7.7	--	50.7	50	--
ICI SEEDS	8513	41.0	--	--	18.5	--	--	7.6	--	--	40.5	--	--
GREAT LAKES	GL583	40.6	37.9	39.1	20.1	20.2	21.2	8.2	7.7	8.3	48.3	49	51
CROW'S	SL45	40.4	--	--	20.6	--	--	8.3	--	--	45.8	--	--
DEKALB	DK591	40.0	--	--	18.2	--	--	7.3	--	--	43.7	--	--
CARGILL	6227	39.6	37.0	--	19.3	20.2	--	7.6	7.4	--	42.5	45	--
CARGILL	X6208	39.4	--	--	20.0	--	--	7.9	--	--	50.0	--	--
CALLAHAN	C7353	39.0	--	--	19.8	--	--	7.7	--	--	51.6	--	--
PIONEER	3357	37.7	36.7	--	20.5	20.7	--	7.7	7.6	--	44.4	46	--
ICI SEEDS	8501	37.3	--	--	20.2	--	--	7.5	--	--	43.2	--	--
CROW'S	401	36.8	--	--	20.9	--	--	7.7	--	--	45.3	--	--
PIONEER	3394	36.6	34.8	--	22.7	22.5	--	8.3	7.8	--	45.4	45	--
GOLDEN HARVEST	EX 552	36.4	--	--	21.0	--	--	7.7	--	--	48.8	--	--
HYPERFORMER	HY9487	35.1	--	--	21.9	--	--	7.7	--	--	48.3	--	--
AMCORN	PSX0020	35.1	--	--	21.3	--	--	7.5	--	--	49.1	--	--
RENK	RK812	34.6	34.3	--	20.7	21.3	--	7.2	7.3	--	44.4	44	--
CALLAHAN	C7258	34.4	--	--	22.0	--	--	7.6	--	--	46.4	--	--
RENK	RK886	33.8	33.4	--	23.3	22.3	--	7.9	7.4	--	51.3	49	--
CALLAHAN	C7259	33.7	--	--	23.3	--	--	7.9	--	--	52.4	--	--
AVERAGE		38.8	37.0	39.1	20.5	20.7	21.2	7.9	7.6	8.3	76.4	75	76
RANGE		33.7	33.4	39.1	18.2	19.0	21.2	7.2	7.3	8.3	40.5	42	51
		TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
		45.4	40.7	39.1	23.3	22.5	21.2	8.9	8.0	8.3	78.7	77	76

1993
PLANTED May 12
HARVESTED October 5, 12
SOIL TYPE Kilmanagh Loam
PREVIOUS CROP Corn
POPULATION 27,400
ROW WIDTH 30"
FERTILIZER 115-0-0
SOIL TEST: pH 6.1
P 160 (very high)
K 392 (very high)

1992
PLANTED May 15
HARVESTED October 14, 23
SOIL TYPE Kilmanagh Loam
PREVIOUS CROP Corn
POPULATION 25,400
ROW WIDTH 30"
FERTILIZER 149-41-96+zinc
SOIL TEST: pH 6.8
P 133 (very high)
K 366 (very high)

1991
PLANTED May 15
HARVESTED September 10, 18
SOIL TYPE Kilmanagh Loam
PREVIOUS CROP Corn
POPULATION 28,000
ROW WIDTH 30"
FERTILIZER 160-141-6
SOIL TEST: pH 6.9
P 98 (high)
K 384 (very high)

FARM COOPERATORS: William, Ron and Ed McCrea, Bad Axe
MSU COOPERATORS: Dr. Michael Allen and David Main, Animal Science Department, East Lansing
COUNTY EXTENSION DIRECTOR: Robert Johnson, Bad Axe
EXTENSION AGRICULTURAL AGENT: James LeCureux, Bad Axe

TABLE 20

SOUTH & NORTH CENTRAL MICHIGAN

ZONES 2 & 3

AVERAGE OF KENT, INGHAM AND HURON COUNTY SILAGE TRIALS
ONE, TWO, THREE YEAR AVERAGES-1993, 1992, 1991

EARLY TRIAL (106 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING))																								
HYBRID (BRAND-VARIETY)		TONS PER ACRE									QUALITY ANALYSES													
		% DRY MATTER			GREEN WEIGHT			DRY WEIGHT			% DMD			% FD			% NDF			% CP				
		1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR	1993	2 YR	3 YR		
FILLER		43.4	--	--	18.7	--	--	8.1	--	--	78.2	--	--	46.7	--	--	40.1	--	--	6.99	--	--		
HYPERFORMER	HY9334	43.2	--	--	19.3	--	--	8.1	--	--	77.4	--	--	45.6	--	--	41.5	--	--	8.02	--	--		
NORTHROP KING	N2933	42.6	--	--	16.6	--	--	7.0	--	--	75.0	--	--	42.2	--	--	43.1	--	--	7.76	--	--		
FILLER		40.6	--	--	18.6	--	--	7.4	--	--	--	--	--	--	--	--	--	--	--	--	--			
GREAT LAKES	GL450	39.9	40.9	42.8	19.8	19.4	19.4	7.9	7.9	8.3	77.3	77	77	46.1	45	46	42.2	43	43	7.27	7.1	6.7		
AMCORN	PSX3333	39.8	41.4	--	18.2	18.1	--	7.1	7.4	--	74.6	74	--	42.2	43	--	44.1	45	--	8.05	7.6	--		
FILLER		39.2	--	--	18.6	--	--	7.1	--	--	--	--	--	--	--	--	--	--	--	--	--			
PIONEER	3769	38.7	--	--	19.3	--	--	7.4	--	--	76.2	--	--	43.5	--	--	42.0	--	--	7.35	--	--		
PIONEER	3723	38.2	38.7	39.6	20.0	19.3	18.9	7.6	7.4	7.4	77.1	77	76	45.7	46	46	42.1	43	45	7.73	7.4	7.4		
DAIRYLAND	STEALTH-1198	38.1	--	--	19.9	--	--	7.5	--	--	76.9	--	--	46.6	--	--	43.2	--	--	7.49	--	--		
PIONEER	3751	37.7	39.7	40.7	20.4	19.2	18.5	7.5	7.5	7.4	77.3	77	76	45.3	45	46	41.5	43	44	7.75	7.5	7.6		
NORTHROP KING	N2899	37.0	--	--	18.7	--	--	6.9	--	--	77.0	--	--	44.3	--	--	41.4	--	--	7.91	--	--		
CALLAHAN	C7245	36.1	39.0	--	20.1	18.9	--	7.3	7.3	--	77.5	77	--	46.3	46	--	41.7	43	--	7.14	6.9	--		
DEKALB	DK485	35.5	37.5	40.0	21.0	20.5	20.4	7.4	7.6	8.1	76.8	76	--	44.7	44	--	42.0	43	--	7.42	7.2	--		
CROW'S	375	35.0	--	--	21.7	--	--	7.5	--	--	76.9	--	--	45.2	--	--	42.0	--	--	7.31	--	--		
AMCORN	PSX5757	34.7	--	--	21.1	--	--	7.3	--	--	76.8	--	--	44.6	--	--	41.9	--	--	7.14	--	--		
CIBA	4372	34.6	--	--	23.1	--	--	7.9	--	--	76.0	--	--	44.7	--	--	43.4	--	--	7.10	--	--		
FILLER		34.1	--	--	21.7	--	--	7.3	--	--	--	--	--	--	--	--	--	--	--	--	--			
DEKALB	DK554	34.0	--	--	23.5	--	--	7.8	--	--	75.5	--	--	45.6	--	--	44.9	--	--	7.47	--	--		
GREAT LAKES	GL496	33.4	35.3	37.2	22.4	21.8	21.4	7.5	7.6	7.9	76.1	76	76	45.2	45	46	43.6	44	45	7.76	7.5	7.4		
DEKALB	DK512	33.2	--	--	22.9	--	--	7.6	--	--	76.8	--	--	45.7	--	--	42.5	--	--	7.11	--	--		
PIONEER	3573	33.2	34.4	35.9	25.0	24.0	22.4	8.3	8.2	7.9	77.6	77	77	46.8	46	47	42.0	43	44	7.39	7.0	7.0		
GREAT LAKES	GL536	32.9	34.2	--	23.7	23.3	--	7.7	7.9	--	77.2	77	--	46.2	47	--	42.4	44	--	7.91	7.8	--		
GREAT LAKES	GL559	32.8	33.3	--	24.1	23.5	--	7.9	7.8	--	77.9	77	--	46.1	47	--	41.1	44	--	7.83	7.4	--		
DAIRYLAND	STEALTH-1205	32.4	--	--	24.6	--	--	7.9	--	--	76.6	--	--	46.4	--	--	43.6	--	--	7.57	--	--		
CROW'S	210	31.7	33.7	--	22.1	21.2	--	6.9	7.0	--	77.7	76	--	48.8	48	--	43.7	45	--	7.78	7.5	--		
PIONEER	3515	31.6	35.2	--	24.6	22.5	--	7.7	7.8	--	76.3	75	--	45.1	44	--	43.1	44	--	7.41	7.0	--		
DAIRYLAND	STEALTH-1208	31.0	--	--	23.3	--	--	7.2	--	--	77.7	--	--	47.4	--	--	42.3	--	--	7.58	--	--		
CARGILL	5327	29.6	--	--	25.1	--	--	7.3	--	--	75.4	--	--	42.7	--	--	42.8	--	--	7.57	--	--		
PIONEER	3525	26.8	30.8	--	29.7	27.1	--	7.9	8.2	--	76.0	75	--	44.4	44	--	43.1	45	--	7.22	6.6	--		
AVERAGE		35.7	36.5	39.4	21.6	21.4	20.2	7.5	7.7	7.8	76.7	76	76	45.3	45	46	42.5	44	44	7.52	7.3	7.2		
RANGE		26.8	30.8	35.9	16.6	18.1	18.5	6.9	7.0	7.4	74.6	74	76	42.2	43	46	40.1	43	43	6.99	6.6	6.7		
		43.4	41.4	42.8	29.7	27.1	22.4	8.3	8.2	8.3	78.2	77	77	48.8	48	47	44.9	45	45	8.05	7.8	7.6		

DMD = DRY MATTER DIGESTABILITY (higher percentage means greater energy content)
 FD = FIBER DIGESTABILITY (the measure of the degree of fermentation of fiber, high FD is desirable)
 NDF = NEUTRAL DETERGENT FIBER (the measure of fiber content, higher levels mean lower energy)
 CP = CRUDE PROTEIN (higher protein levels require less supplementation)

(continued below)

LATE TRIAL (107 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING))

HYBRID (BRAND-VARIETY)		% DRY MATTER			TONS PER ACRE			GREEN WEIGHT			DRY WEIGHT			% DMD			QUALITY ANALYSES			% CP		
		2 3			2 3			2 3			2 3			2 3			2 3			2 3		
		1993 YR YR			1993 YR YR			1993 YR YR			1993 YR YR			1993 YR YR			1993 YR YR			1993 YR YR		
HYPERFORMER	HY9424	38.0	--	--	23.4	--	--	8.8	--	--	76.5	--	--	44.7	--	--	42.4	--	--	7.38	--	--
ICI SEEDS	8543	37.2	36.1	--	22.5	22.2	--	8.1	7.9	--	76.2	76	--	45.0	45	--	43.2	44	--	7.15	7.0	--
CIBA	4394	36.7	--	--	23.6	--	--	8.6	--	--	75.7	--	--	42.9	--	--	42.5	--	--	6.69	--	--
DEKALB	DK580	36.6	--	--	22.1	--	--	7.9	--	--	76.6	--	--	47.1	--	--	44.3	--	--	7.34	--	--
CALLAHAN	C7252	36.5	37.5	--	22.7	22.4	--	8.1	8.3	--	77.4	77	--	46.4	47	--	42.2	44	--	6.87	6.6	--
GREAT LAKES	GL583	35.5	35.1	38.4	23.2	23.2	22.4	8.1	8.1	8.4	77.7	76	77	47.1	47	48	42.2	44	45	7.08	6.8	6.9
DAIRYLAND	DX-1110	35.3	--	--	22.7	--	--	7.9	--	--	77.1	--	--	48.1	--	--	44.1	--	--	7.12	--	--
CROW'S	SL45	35.1	--	--	23.5	--	--	8.0	--	--	74.3	--	--	45.7	--	--	47.3	--	--	7.33	--	--
DEKALB	DK591	34.2	--	--	24.7	--	--	8.2	--	--	75.3	--	--	43.7	--	--	43.8	--	--	7.48	--	--
ICI SEEDS	8513	34.2	--	--	23.5	--	--	7.8	--	--	75.9	--	--	42.9	--	--	42.3	--	--	7.03	--	--
AMCORN	PSX9292	34.2	35.4	37.2	23.6	22.9	21.5	7.9	8.0	7.9	78.0	77	77	49.6	49	49	43.5	45	45	7.17	7.0	6.9
ICI SEEDS	8501	34.0	--	--	23.6	--	--	7.9	--	--	76.5	--	--	46.2	--	--	43.7	--	--	7.22	--	--
CALLAHAN	C7353	33.9	--	--	23.9	--	--	7.9	--	--	78.0	--	--	49.2	--	--	43.4	--	--	7.13	--	--
CARGILL	6227	33.6	34.8	--	22.5	22.7	--	7.4	7.8	--	76.2	76	--	44.8	46	--	43.1	45	--	6.87	6.7	--
CROW'S	401	33.5	--	--	23.7	--	--	7.9	--	--	76.7	--	--	46.5	--	--	43.5	--	--	7.10	--	--
GOLDEN HARVEST	EX 552	33.3	--	--	23.9	--	--	7.9	--	--	77.0	--	--	48.0	--	--	44.2	--	--	7.01	--	--
HYPERFORMER	HY9487	32.6	--	--	24.6	--	--	8.0	--	--	76.1	--	--	47.7	--	--	45.6	--	--	7.01	--	--
PIONEER	3357	32.6	34.2	38.1	23.7	22.9	21.6	7.6	7.7	8.0	76.7	76	76	48.6	48	47	45.3	46	45	7.43	6.9	6.8
RENK	RK812	32.3	33.5	--	24.0	23.9	--	7.7	8.0	--	76.8	75	--	45.8	45	--	42.7	45	--	7.16	6.9	--
AMCORN	PSX0020	32.3	--	--	24.5	--	--	7.8	--	--	78.1	--	--	48.6	--	--	42.7	--	--	7.09	--	--
CARGILL	X6208	32.1	--	--	25.0	--	--	7.9	--	--	77.0	--	--	47.1	--	--	43.6	--	--	7.23	--	--
PIONEER	3394	31.8	32.2	36.0	26.6	26.0	23.4	8.3	8.3	8.2	76.6	75	75	44.6	45	45	42.3	46	46	7.01	6.7	6.7
CALLAHAN	C7258	31.8	--	--	25.1	--	--	7.9	--	--	77.1	--	--	47.8	--	--	43.9	--	--	7.14	--	--
RENK	RK886	31.6	32.2	--	26.0	25.7	--	8.2	8.3	--	77.1	76	--	47.2	47	--	43.6	45	--	7.08	6.9	--
CALLAHAN	C7259	30.6	--	--	25.8	--	--	7.9	--	--	76.1	--	--	49.6	--	--	47.6	--	--	8.00	--	--
AVERAGE		34.0	34.6	37.4	23.9	23.5	22.2	8.0	8.0	8.1	76.7	76	76	46.6	47	47	43.7	45	45	7.17	6.8	6.8
RANGE		30.6	32.2	36.0	22.1	22.2	21.5	7.4	7.7	7.9	74.3	75	75	42.9	45	45	42.2	44	45	6.69	6.6	6.7
		TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO
		38.0	37.5	38.4	26.6	26.0	23.4	8.8	8.3	8.4	78.1	77	77	49.6	49	49	47.6	46	46	8.00	7.0	6.9

TABLE 21 NORTHERN MICHIGAN ZONE 4
ALPENA COUNTY TRIAL-SILAGE
ONE YEAR AVERAGE-1993

HYBRID (BRAND-VARIETY)	TONS PER ACRE			QUALITY ANALYSES			
	% DRY MATTER	GREEN WEIGHT	DRY WEIGHT	%DM	%FD	%NDF	%CP
CARGILL 809	32.5	15.3	5.0	78.0	49.6	43.8	7.47
FILLER	32.0	16.3	5.2	---	---	---	---
PIONEER 3861	31.2	17.9	5.6	76.4	48.0	45.4	6.71
DAIRYLAND STEALTH-1185	30.9	17.5	5.4	72.7	48.3	52.8	6.78
PIONEER 3769	29.8	19.3	5.7	76.4	46.0	43.6	6.42
ICI SEEDS SC1594	29.7	16.9	5.0	75.5	49.3	48.4	6.54
DAIRYLAND STEALTH-1180	29.3	14.6	4.3	76.7	43.9	41.5	7.19
PIONEER 3723	28.7	19.5	5.6	77.1	49.9	45.7	7.32
PIONEER 3751	28.4	18.8	5.3	76.5	51.5	48.6	7.02
CARGILL 2927	27.9	19.2	5.3	78.5	54.0	46.7	7.17
FILLER	27.5	18.5	5.1	---	---	---	---
FILLER	27.5	21.0	5.8	75.5	52.7	51.8	6.90
CARGILL 119564	27.0	19.4	5.3	75.9	52.2	50.5	7.39
PIONEER 3515	24.9	21.3	5.3	74.8	48.3	48.8	6.60
PIONEER 3573	24.3	22.0	5.4	75.8	51.7	50.2	6.45
PIONEER 3525	23.0	23.6	5.4	74.5	50.6	51.7	6.83
AVERAGE	28.4	18.8	5.3	76.0	49.7	47.8	6.91
RANGE	22.0 TO 32.5	14.6 TO 23.6	4.3 TO 5.8	72.7 TO 78.5	43.9 TO 54.0	41.5 TO 52.8	6.40 TO 7.47

1993
PLANTED May 12
HARVESTED October 8
SOIL TYPE Selkirk Loam
PREVIOUS CROP Navy Beans
POPULATION 23,900
ROW WIDTH 30"
FERTILIZER 104-47-103
SOIL TEST: PH 7.5
P 85 (high)
K 368 (very high)

FARM COOPERATOR: Allen Schiellard, Hubbard Lake
MSU COOPERATORS: Dr. Michael Allen and David Main, Animal Science Dept. East Lansing
COUNTY EXTENSION DIRECTOR: Paul Wegmeyer, Alpena

TABLE 22 NORTHERN MICHIGAN ZONE 4
MISSAUKEE COUNTY TRIAL-SILAGE
ONE YEAR AVERAGE-1993

HYBRID (BRAND-VARIETY)	TONS PER ACRE			QUALITY ANALYSES			
	% DRY MATTER	GREEN WEIGHT	DRY WEIGHT	%DM	%FD	%NDF	%CP
CARGILL 809	38.2	10.7	4.1	76.0	46.1	44.5	7.02
PIONEER 3861	38.0	11.8	4.5	76.3	51.7	49.0	6.77
PIONEER 3769	37.3	12.2	4.5	77.6	52.7	47.4	6.65
FILLER	36.7	11.3	4.1	---	---	---	---
PIONEER 3723	35.6	12.2	4.4	75.2	51.0	50.7	7.30
DAIRYLAND STEALTH-1185	35.6	10.6	3.8	75.1	51.3	51.6	6.82
DAIRYLAND STEALTH-1180	35.4	10.1	3.6	77.8	50.0	44.4	7.19
FILLER	34.1	12.7	4.3	---	---	---	---
PIONEER 3751	34.0	11.9	4.1	76.2	52.1	49.7	7.78
ICI SEEDS SC1594	33.9	11.8	4.0	77.5	53.7	48.5	6.91
CARGILL 2927	33.5	13.1	4.4	75.5	50.5	49.6	7.51
FILLER	32.5	13.2	4.3	75.6	52.6	51.4	7.01
CARGILL 119564	32.3	12.4	4.0	76.7	54.3	50.3	7.03
PIONEER 3515	30.3	14.6	4.4	75.1	49.9	49.7	6.58
PIONEER 3573	29.7	13.4	4.0	76.5	55.8	53.2	7.04
PIONEER 3525	29.5	16.0	4.7	73.0	49.9	53.8	6.44
AVERAGE	34.2	12.4	4.2	76.0	51.5	49.6	7.00
RANGE	29.5 TO 38.2	10.1 TO 16.0	3.6 TO 4.7	73.0 TO 77.8	46.1 TO 55.8	44.4 TO 53.8	6.40 TO 7.78

1993
PLANTED May 13
HARVESTED October 8
SOIL TYPE Wester Sandy Loam
PREVIOUS CROP Corn
POPULATION 24,550
ROW WIDTH 30"
FERTILIZER 83-39-39
SOIL TEST: PH 6.4
P 63 (high)
K 147 (low)

FARM COOPERATORS: Doug Nielsen and George McGloughlin, MSU's Lake City Exp't Station
MSU COOPERATORS: Dr. Michael Allen and David Main, Animal Science Dept. East Lansing
COUNTY EXTENSION DIRECTOR: Richard Miller, Lake City

TABLE 23 NORTHERN MICHIGAN ZONE 4
AVERAGES OF ALPENA & MISSAUKEE COUNTY SILAGE TRIAL
ONE YEAR AVERAGE-1993

HYBRID (BRAND-VARIETY)	TONS PER ACRE			QUALITY ANALYSES			
	% DRY MATTER	GREEN WEIGHT	DRY WEIGHT	%DM	%FD	%NDF	%CP
CARGILL 809	35.4	13.0	4.6	77.0	47.9	44.2	7.25
PIONEER 3861	34.6	14.9	5.1	76.4	49.9	47.2	6.74
FILLER	34.4	13.8	4.7	---	---	---	---
PIONEER 3769	33.6	15.8	5.1	77.0	49.4	45.5	6.53
DAIRYLAND STEALTH-1185	33.3	14.1	4.6	73.9	49.8	52.2	6.80
DAIRYLAND STEALTH-1180	32.4	12.4	4.0	77.3	47.0	43.0	7.19
PIONEER 3723	32.2	15.9	5.0	76.2	50.5	48.2	7.31
ICI SEEDS SC1594	31.8	14.4	4.5	76.5	51.5	48.5	6.73
PIONEER 3751	31.2	15.4	4.7	76.4	51.8	49.2	7.40
FILLER	30.8	15.6	4.7	---	---	---	---
CARGILL 2927	30.7	16.2	4.9	77.0	52.3	48.2	7.34

HYBRID (BRAND-VARIETY)	TONS PER ACRE			QUALITY ANALYSES			
	% DRY MATTER	GREEN WEIGHT	DRY WEIGHT	%DM	%FD	%NDF	%CP
FILLER	30.0	17.1	5.1	75.6	52.7	51.6	6.96
CARGILL 119564	29.7	15.9	4.7	76.3	53.3	50.4	7.21
PIONEER 3515	27.6	18.0	4.9	75.0	49.1	49.3	6.59
PIONEER 3573	27.0	17.7	4.7	76.2	53.8	51.7	6.75
PIONEER 3525	26.3	19.8	5.1	73.8	50.3	52.8	6.64
AVERAGE	31.3	15.6	4.8	76.0	50.6	48.7	6.96
RANGE	26.3 TO 35.4	12.4 TO 19.8	4.0 TO 5.1	73.8 TO 77.3	47.0 TO 53.8	43.0 TO 52.8	6.53 TO 7.40

COMPANIES WITH HYBRIDS ENTERED IN 1993 TRIALS

<u>BRAND</u>	<u>COMPANY NAME AND ADDRESS</u>
AGRIGENE	Mycogen Plant Sciences, 720 St. Croix St Prescott, WI 54021
AMCORN	Amcorn Hybrids, Inc., 1093 129th Street, P.O.Box 6 Bradley, MI 49311
ANDERSONS	The Andersons, P.O. Box 119 Maumee, OH 43537
ASGROW	Asgrow Seed Company, 7000 Portage Road Kalamazoo, MI 49001
BECK'S	Beck's Superior Hybrids, 6767 East 276th St Atlanta, IN 46031
BLANEY	Blaney Seeds, Rt.1 Box 40 Francesville, IN 47946
CALLAHAN	Callahan Enterprises, Inc., 1122 E. 169th St Westfield, IN 46074
CARGILL	Cargill Hybrid Seeds, Box 5645 Minneapolis, MN 55440-5645
CIBA	CIBA Seeds, 12275 South Sherman Lake Drive Augusta, MI 49012
CROW'S	Crow's Hybrid Corn Company, Box 306 Milford, IL 60953
DAIRYLAND	Dairyland Seed Co., Inc., Box 958, 3570 Hwy.H West Bend, WI 53095-0958
DEKALB	Dekalb Plant Genetics, 3100 Sycamore Road Dekalb, IL 60115
DYNA-GRO	UAP Seed Company, Grower Service, P.O.Box 18037, Lansing, MI 48901
GEN-TECH	Gen-Tech Farm Seeds, Inc., 15740 Old 31, Argos, IN 46501
GOLDEN HARVEST	Sommer Bros. Seed Company, P.O. Box 248 Pekin, IL 61554
GREAT LAKES	Great Lakes Hybrids, Inc., 9915 West M-21, P.O.Box 637 Ovid, MI 48866
GRIES	Gries Seed Farms, Inc., 2348 North Fifth St Fremont, OH 43420
GUTWEIN	Fred Gutwein & Sons, Route 1, Box 40 Francesville, IN 47946
HYPERFORMER	HyPerformer Seed Co. 3477 S.Graham Rd. Hwy M-52 Saginaw, MI 48603
ICI SEEDS	ICI Seeds, Inc., 6945 Vista Drive West Des Moines, IA 50266

<u>BRAND</u>	<u>COMPANY NAME AND ADDRESS</u>
JACQUES	Mycogen Plant Sciences, 720 St. Croix St. Prescott, WI 54021
JUNG	Jung Farms, Inc., 335 South High Street Randolph, WI 53957
LAND O'LAKES	Stephenson Marketing Stephanson, MI 53121
LEADER	Leader Seeds, Inc., 7160 S.R. 118 Celina, OH 45822
MYCOGEN	Mycogen Plant Sciences, 720 St. Croix St. Prescott, WI 54021
NORTHRUP KING	Northrup King Company, P.O.Box 959 Minneapolis, MN 55440
PAYCO	Michigan State Seed/Payco, 717 N. Clinton Street Grand Ledge, MI 48837
PICKSEED	Pickseed Canada, Inc., Box 517 Tilbury, Ontario, Canada NOP 2L0
PIONEER	Pioneer Hi-Bred International, Inc., R3 05-653 Route 15 N, P.O.Box 756 Bryan, OH 43506-0756
PRAIRIE STREAM	Prairie Stream Farms, Inc., Route 3, Box 2175 Kelly Rd E. Frankfort, IN 46041
PRO-SEED	Pro-Seed, 236 Sugar Street, Box 55 Blissfield, MI 49228
RENK	Renk Seed Company, 6800 Wilburn Road Sun Prairie, WI 53590
RUPP	Rupp Seeds, Inc., 17919 Co. Rd B Wauseon, OH 43567
STINE	Stine Seed Company, 2225 Laredo Trail Adel, IA 50003
TERRA	Terra International, Terra Centre, 600 Fourth Street, P.O.Box 6000 Sioux City, IA 51102-6000
TOP FARM	Top Farm Hybrids, Inc., P. O. Box 850 Cokato, MN 55321
TRELAY	Trelay Inc., 11623 Hwy 80 N Livingston, WI 53554
TRI-STATE	Tri-State Seeds, P.O.Box 341 Richmond, MI 49083
VIGORO	Vigoro Industries, 2007 W. Hwy 50 Fairview Heights, IL 62208
WOLF RIVER VALLEY	Wolf River Valley Seeds, N. 2976 Cty Hwy. M White Lake, WI 54491

TABLE 24

Index for 297 hybrids from 38 seed companies entered in 1569 county tests in the 1993 Michigan Corn Performance Trials. Numbers within parentheses refer to table numbers in which the hybrid appears. Company names used in association with hybrid numbers refer to the brand and the numbers are the variety (hybrid) designation.

Mycogen Plant Sciences

AgriGene AG 3965 (5,6,7,8,9,10,11,12)
AgriGene AG 4250 (9,10,11,12)

AgriGene AG 5660 (1,2,3,4)

Amcorn Hybrids, Inc.

Amcorn PSX 0020 (1,2,3,4,17,18,19,20)
Amcorn PSX 1185 (13,14,15,16)
Amcorn PSX 3333 (9,10,11,12,
13,14,15,16,17,18,19,20)
Amcorn PSX 4747 (1,2,3,4,5,6,7,8,
9,10,11,12)
Amcorn PSX 5555 (5,6,7,8,9,10,11,12)

Amcorn PSX 5757 (1,2,3,4,5,6,7,8,
9,10,11,12,17,18,19,20)
Amcorn PSX 9009 (1,2,3,4,5,6,7,8,
9,10,11,12)
Amcorn PSX 9292 (1,2,3,4,5,6,7,8,
17,18,19,20)

The Andersons

Andersons PSX 345 (5,6,7,8)
Andersons PSX 370 (1,2,3,4)
Andersons PSX 405 (1,2,3,4)

Andersons HSX 2241 (9,10,11,12)
Andersons HSX 44011 (9,10,11,12)

Asgrow Seed Co.

Asgrow RX 433 (9,10,11,12)
Asgrow RX 497 (5,6,7,8,9,10,11,12)
Asgrow RX 510 (5,6,7,8)

Asgrow RX 623 (1,2,3,4,5,6,7,8,
9,10,11,12)
Asgrow RX 707 (1,2,3,4)
Asgrow RX 745 (1,2,3,4)

Beck's Superior Hybrids

Beck's 48 (1,2,3,4)
Beck's 54XA (1,2,3,4)
Beck's 57 (1,2,3,4)

Beck's 60MVP (1,2,3,4)
Beck's 63MVP (1,2,3,4)
Beck's 6111 (1,2,3,4)

Blaney Seeds

Blaney 405 (5,6,7,8,9,10,11,12)
Blaney 2070 (5,6,7,8,9,10,11,12)

Blaney 2100 (5,6,7,8,9,10,11,12)

Callahan Enterprises, Inc.

Callahan C725 (9,10,11,12)
Callahan C729 (5,6,7,8,9,10,11,12)
Callahan C7245 (1,2,3,4,5,6,7,8,
9,10,11,12,17,18,19,20)
Callahan C7249 (1,2,3,4,5,6,7,8)
Callahan C7252 (1,2,3,4,5,6,7,8,
17,18,19,20)
Callahan C7258 (17,18,19,20)
Callahan C7259 (17,18,19,20)
Callahan C7337 (1,2,3,4,5,6,7,8,
9,10,11,12)

Callahan C7339 (1,2,3,4,5,6,7,8,
9,10,11,12)
Callahan C7348 (1,2,3,4,5,6,7,8)
Callahan C7353 (17,18,19,20)
Callahan C7425X (5,6,7,8,9,10,11,12)
Callahan C7434X (1,2,3,4,5,6,7,8,
9,10,11,12)
Callahan C7435X (1,2,3,4,5,6,7,8,
9,10,11,12)
Callahan C7446X (1,2,3,4,5,6,7,8,
9,10,11,12)
Callahan C7452ITX (1,2,3,4)

Cargill Hybrid Seeds

Cargill SX269 (1,2,3,4,5,6,7,8)
Cargill 809 (21,22,23)
Cargill 2037 (13,14,15,16)
Cargill X2497 (13,14,15,16)
Cargill 2927 (9,10,11,12,13,14,15,16,
21,22,23)
Cargill 3427 (5,6,7,8,9,10,11,12,
13,14,15,16)
Cargill 3777 (5,6,7,8,9,10,11,12)
Cargill 4277 (1,2,3,4,5,6,7,8,9,10,11,12)

Cargill 4327 (1,2,3,4,5,6,7,8,9,10,11,12)
Cargill X5307 (1,2,3,4,5,6,7,8)
Cargill 5327 (1,2,3,4,5,6,7,8,9,10,11,12,
17,18,19,20)
Cargill X6208 (17,18,19,20)
Cargill 6227 (1,2,3,4,5,6,7,8,17,18,19)
Cargill 6677 (1,2,3,4,5,6,7,8)
Cargill 7877 (1,2,3,4)
Cargill 7897 (1,2,3,4)
Cargill 119564 (21,22,23)

Ciba Seeds

Ciba 4024 (13,14,15,16)
Ciba 4070 (9,10,11,12)
Ciba 4120 (9,10,11,12,13,14,15,16)
Ciba 4172 (9,10,11,12)
Ciba 4273 (5,6,7,8,9,10,11,12)

Ciba 4282 (5,6,7,8)
Ciba 4372 (1,2,3,4,5,6,7,8,17,18,19,20)
Ciba 4394 (1,2,3,4,5,6,7,8,17,18,19,20)
Ciba 4494 (1,2,3,4)

(continued next column)

Crow's Hybrid Corn Company

Crow's 210 (5,6,7,8,9,10,11,12,
17,18,19,20)
Crow's 370 (1,2,3,4,5,6,7,8,9,10,11,12)
Crow's 375 (1,2,3,4,5,6,7,8,9,10,11,12,
17,18,19,20)

Crow's 401 (1,2,3,4,5,6,7,8,9,10,11,12,
17,18,19,20)
Crow's 445 (1,2,3,4,5,6,7,8,9,10,11,12)
Crow's 494 (1,2,3,4,5,6,7,8,9,10,11,12)
Crow's SL45 (17,18,19,20)

Dairyland Seed Company, Inc.

Dairyland DX-1100 (9,10,11,12)
Dairyland DX-1110 (1,2,3,4,5,6,7,8,
17,18,19,20)
Dairyland Stealth-1108 (1,2,3,4,5,6,7,8,
9,10,11,12)
Dairyland Stealth-1114 (1,2,3,4)
Dairyland Stealth-1115 (1,2,3,4)
Dairyland Stealth-1175 (13,14,15,16)
Dairyland Stealth-1180 (13,14,15,16,
21,22,23)
Dairyland Stealth-1185 (13,14,15,16,
21,22,23)
Dairyland Stealth-1187 (13,14,15,16)

Dairyland Stealth-1198 (5,6,7,8,9,10,11,12,
13,14,15,16,17,18,19,20)
Dairyland Stealth-1202 (9,10,11,12)
Dairyland Stealth-1203 (1,2,3,4,9,10,11,12)
Dairyland Stealth-1205 (1,2,3,4,5,6,7,8,
9,10,11,12,17,18,19,20)
Dairyland Stealth-1207 (1,2,3,4)
Dairyland Stealth-1208 (1,2,3,4,5,6,7,8,
17,18,19,20)
Dairyland Stealth-1212 (1,2,3,4)
Dairyland Stealth-1285 (13,14,15,16)
Dairyland Stealth-1294 (9,10,11,12)

Dekalb Plant Genetics

Dekalb DK306 (13,14,15,16)
Dekalb DK352 (13,14,15,16)
Dekalb DK381 (9,10,11,12,13,14,15,16)
Dekalb DK401 (9,10,11,12,13,14,15,16)
Dekalb DK471 (5,6,7,8,9,10,11,12)
Dekalb DK485 (5,6,7,8,9,10,11,12,
17,18,19,20)

Dekalb DK493 (5,6,7,8,9,10,11,12)
Dekalb DK512 (5,6,7,8,9,10,11,12,
17,18,19,20)
Dekalb DK554 (5,6,7,8,17,18,19,20)
Dekalb DK580 (17,18,19,20)
Dekalb DK591 (17,18,19,20)

UAP Seed Company

Dyna-Gro 5313 I PRO (5,6,7,8)

Dyna-Gro 5491 I Pro (1,2,3,4)

Gen-Tech Farm Seeds, Inc.

Gen-Tech 1073 (1,2,3,4)

Gen-Tech 1084 (1,2,3,4)

Sommers Bros. Seed Company

Golden Harvest H-2331 (1,2,3,4,5,6,7,8,
9,10,11,12)
Golden Harvest H-2349 (1,2,3,4,5,6,7,8,
9,10,11,12)

Golden Harvest H-2490 (1,2,3,4,5,6,7,8,
9,10,11,12)
Golden Harvest H-2485 (1,2,3,4,5,6,7,8)
Golden Harvest EX 552 (1,2,3,4,
17,18,19,20)

Great Lakes Hybrids, Inc.

Great Lakes GL450 (5,6,7,8,9,10,11,12,
17,18,19,20)
Great Lakes GL471 (5,6,7,8,9,10,11,12)
Great Lakes GL496 (5,6,7,8,9,10,11,12,
17,18,19,20)
Great Lakes GL515 (5,6,7,8,9,10,11,12)

Great Lakes GL536 (17,18,19,20)
Great Lakes GL559 (5,6,7,8,9,10,11,12,
17,18,19,20)
Great Lakes GL581 (1,2,3,4)
Great Lakes GL583 (1,2,3,4,17,18,19,20)

Gries Seed Farms, Inc.

Gries GSF 2393 (5,6,7,8,9,10,11,12)
Gries GSF 4100 (5,6,7,8,9,10,11,12)

Gries GSF 4103 (1,2,3,4)

Fred Gutwein & Sons, Inc.

Gutwein 2120 (5,6,7,8,9,10,11,12)
Gutwein 2434 (1,2,3,4)

Gutwein 2474 (1,2,3,4)

HyPerformer Seed Company

HyPerformer HS 9330 (5,6,7,8)
HyPerformer HY 9334 (5,6,7,8,
17,18,19,20)
HyPerformer HY 9339 (5,6,7,8)
HyPerformer HY 9385 (1,2,3,4,5,6,7,8)
HyPerformer HS 9388 (1,2,3,4)
HyPerformer HS 9408 (1,2,3,4)

HyPerformer HY 9424 (1,2,3,4,5,6,7,8,
17,18,19,20)
HyPerformer HY 9487 (1,2,3,4,5,6,7,8,
17,18,19,20)
HyPerformer HS 9502 (1,2,3,4)
HyPerformer HY 9610 (1,2,3,4)

(continued next page)

ICI Seed Company

ICI Seeds SC1594 (21,22,23)
 ICI Seeds SC1999 (9,10,11,12)
 ICI Seeds 8501 (1,2,3,4,17,18,19,20)
 ICI Seeds 8513 (1,2,3,4,17,18,19,20)
 ICI Seeds 8543 (5,6,7,8,17,18,19,20)

Mycogen Plant Sciences

Jacques 4440 (9,10,11,12,13,14,15,16)
 Jacques 4770 (9,10,11,12)

Jung Farms, Inc.

Jung 2284 (13,14,15,16)
 Jung 2386 (13,14,15,16)
 Jung 2394 (13,14,15,16)
 Jung 2496 (9,10,11,12,13,14,15,16)

Stephenson Marketing

Land O'Lakes 144 (15)
 Land O'Lakes 166 (15)

Leader Seeds, Inc.

Leader SX533 (1,2,3,4)

Mycogen Plant Sciences

Mycogen 3440 (9,10,11,12,13,14,15,16)
 Mycogen 5440 (5,6,7,8,9,10,11,12)
 Mycogen 6220 (1,2,3,4,5,6,7,8)

Northrup King Company

Northrup King N2409 (9,10,11,12,
 13,14,15,16)
 Northrup King N2879 (5,6,7,8,9,10,11,12,
 13,14,15,16)
 Northrup King N2899 (17,18,19,20)
 Northrup King N2933 (5,6,7,8,9,10,11,12,
 17,18,19,20)

Payco Seed Company

Payco 222 (13,14,15,16)
 Payco 248 (9,10,11,12)
 Payco 253 (9,10,11,12,13,14,15,16)
 Payco 402 (9,10,11,12)
 Payco 413 (5,6,7,8,9,10,11,12)
 Payco 531 (1,2,3,4,5,6,7,8)
 Payco 633 (1,2,3,4,5,6,7,8)
 Payco 648 (5,6,7,8)
 Payco 711 (1,2,3,4,5,6,7,8)
 Payco 814 (1,2,3,4)
 Payco 823 (1,2,3,4)
 Payco 2432 (9,10,11,12)

Pickseed Canada, Inc.

Pickseed 2620 (13,14,15,16)
 Pickseed 2621 (13,14,15,16)
 Pickseed 4990 (13,14,15,16)
 Pickseed 5665 (9,10,11,12)

Pioneer Hi-Bred International, Inc.

Pioneer X1002U (1,2,3,4,5,6,7,8,
 9,10,11,12,13,14,15,16)
 Pioneer X1032D (1,2,3,4,9,10,11,12,
 13,14,15,16)
 Pioneer X1082P (1,2,3,4,5,6,7,8)
 Pioneer 3241 (1,2,3,4)
 Pioneer 3293 (1,2,3,4)
 Pioneer 3357 (1,2,3,4,17,18,19,20)
 Pioneer 3394 (1,2,3,4,5,6,7,8,17,18,19,20)
 Pioneer 3417 (1,2,3,4)
 Pioneer 3515 (1,2,3,4,5,6,7,8,9,10,11,12,
 17,18,19,20,21,22,23)

ICI Seeds N8562 (1,2,3,4,5,6,7,8)
 ICI Seeds 8700 (5,6,7,8,9,10,11,12)
 ICI Seeds 8777 (9,10,11,12)
 ICI Seeds 8883 (13,14,15,16)
 ICI Seeds 8954 (13,14,15,16)

Jacques 6970 (1,2,3,4,5,6,7,8)

Jung 2596 (9,10,11,12)
 Jung 2648 (9,10,11,12)
 Jung 2680 (9,10,11,12)

Land O'Lakes 809 (15)

Leader SX574A (1,2,3,4)

Mycogen 7220 (1,2,3,4)
 Mycogen 6890 (1,2,3,4)

Northrup King N3808 (5,6,7,8,9,10,11,12)
 Northrup King N4242 (1,2,3,4,5,6,7,8,
 9,10,11,12)
 Northrup King N5220 (1,2,3,4,5,6,7,8)
 Northrup King N5901 (1,2,3,4)
 Northrup King N6484 (1,2,3,4)

Payco 3131 (9,10,11,12,13,14,15,16)
 Payco 4211 (5,6,7,8,9,10,11,12)
 Payco 4421 (5,6,7,8,9,10,11,12)
 Payco 5131 (5,6,7,8,9,10,11,12)
 Payco 5132 (5,6,7,8,9,10,11,12)
 Payco 5133 (5,6,7,8,9,10,11,12)
 Payco 5331 (1,2,3,4,5,6,7,8,9,10,11,12)
 Payco 6331 (1,2,3,4,5,6,7,8)
 Payco 6431 (1,2,3,4,5,6,7,8)
 Payco 7031 (1,2,3,4,5,6,7,8)
 Payco 7132 (1,2,3,4)
 Payco 7432 (1,2,3,4)

Pickseed 5990 (9,10,11,12)
 Pickseed 5993 (9,10,11,12)
 Pickseed 8855L (5,6,7,8)

Pioneer 3525 (1,2,3,4,5,6,7,8,9,10,11,12,
 17,18,19,20,21,22,23)
 Pioneer 3527 (1,2,3,4,5,6,7,8)
 Pioneer 3563 (1,2,3,4)
 Pioneer 3573 (1,2,3,4,5,6,7,8,9,10,11,12,
 17,18,19,20,21,22,23)
 Pioneer 3723 (1,2,3,4,5,6,7,8,9,10,11,12,
 13,14,15,16,17,18,19,20,21,22,23)
 Pioneer 3733 (1,2,3,4,5,6,7,8,9,10,11,12,
 13,14,15,16)
 Pioneer 3751 (1,2,3,4,5,6,7,8,9,10,11,12,
 13,14,15,16,17,18,19,20,21,22,23)

Pioneer 3769 (5,6,7,8,9,10,11,12,
 13,14,15,16,17,18,19,20,21,22,23)
 Pioneer 3861 (5,6,7,8,9,10,11,12,
 13,14,15,16,21,22,23)

Prairie Stream Farms, Inc.

Prairie Stream SX412 (1,2,3,4)

Pro-Seed

Pro-Seed PS Exp.2810 (1,2,3,4,5,6,7,8)

Renk Seed Company

Renk RK555 (9,10,11,12)
 Renk RK602 (9,10,11,12)
 Renk RK617 (1,2,3,4,5,6,7,8,9,10,11,12)
 Renk RK657 (9,10,11,12)

Rupp Seeds, Inc.

Rupp XR1469 (13,14,15,16)
 Rupp XR1489 (13,14,15,16)
 Rupp XR1505 (13,14,15,16)
 Rupp XR1623 (1,2,3,4,9,10,11,12)
 Rupp XR1635 (5,6,7,8)
 Rupp XR1644 (5,6,7,8,9,10,11,12)
 Rupp XR1677 (1,2,3,4,5,6,7,8,9,10,11,12)

Stine Seed Company

Stine 993 (5,6,7,8,9,10,11,12)
 Stine 1059 (5,6,7,8,9,10,11,12)
 Stine 1073 (1,2,3,4,5,6,7,8)
 Stine 1080 (1,2,3,4,5,6,7,8,9,10,11,12)

Terra International, Inc.

Terra TR230E (13,14,15,16)
 Terra TR600E (1,2,3,4,5,6,7,8)
 Terra E860 (13,14,15,16)
 Terra TR910 (9,10,11,12)
 Terra E981 (9,10,11,12)

Top Farm Hybrids

Top Farm TFSx1097A (5,6,7,8,9,10,11,12)
 Top Farm TFSx1107 (1,2,3,4,5,6,7,8)
 Top Farm TFSx1114 (1,2,3,4)
 Top Farm TFSx1193 (9,10,11,12)

Trelay Seeds, Inc.

Trelay 5101 (5,6,7,8)
 Trelay 5200 (5,6,7,8)

Tri State Seeds

Tri State TS411 (1,2,3,4)
 Tri State TS536 (1,2,3,4)
 Tri State TS555 (1,2,3,4)

Vigoro Industries

Vigoro V1032 (1,2,3,4,5,6,7,8)
 Vigoro V1052 (1,2,3,4,5,6,7,8)
 Vigoro V1072 (1,2,3,4)

Wolf River Valley Seeds

Wolf River Valley WRV-9185 (13,14,15,16)

Pioneer 3876 (9,10,11,12,13,14,15,16)
 Pioneer 3907 (13,14,15,16)
 Pioneer 3921 (9,10,11,12,13,14,15,16)
 Pioneer 3982 (15)

Pro-Seed PS 3104 (1,2,3,4,5,6,7,8)

Renk RK714 (1,2,3,4,5,6,7,8)
 Renk RK812 (1,2,3,4,5,6,7,8,17,18,19,20)
 Renk RK886 (1,2,3,4,17,18,19,20)

Rupp XR1739 (1,2,3,4)
 Rupp XR1808 (1,2,3,4,5,6,7,8)
 Rupp XR1824 (1,2,3,4)
 Rupp XR1840 (1,2,3,4)
 Rupp XR2319 (13,14,15,16)
 Rupp Exp.1-201 (5,6,7,8)
 Rupp Exp.3-220 (9,10,11,12)

Stine 1116A (1,2,3,4)
 Stine 92-23X (9,10,11,12)
 Stine 92-329X (1,2,3,4)

Terra TR1031 (1,2,3,4,5,6,7,8,9,10,11,12)
 Terra TR1050 (1,2,3,4,5,6,7,8)
 Terra TR1090 (1,2,3,4)
 Terra TR1101 (1,2,3,4)

Top Farm TFSx2102 (9,10,11,12)
 Top Farm TFSx2104 (1,2,3,4,5,6,7,8)
 Top Farm TFSx2195 (9,10,11,12)

Trelay 8900 (1,2,3,4)
 Trelay 9600 (1,2,3,4)

Tri State TS574 (1,2,3,4)
 Tri State TS750 (1,2,3,4)
 Tri State TS788 (1,2,3,4)

Vigoro V Exp.830001 (13,14,15,16)
 Vigoro V Exp.830004 (13,14,15,16)

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