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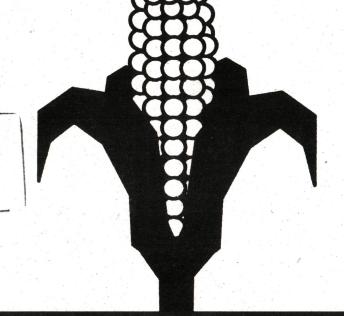
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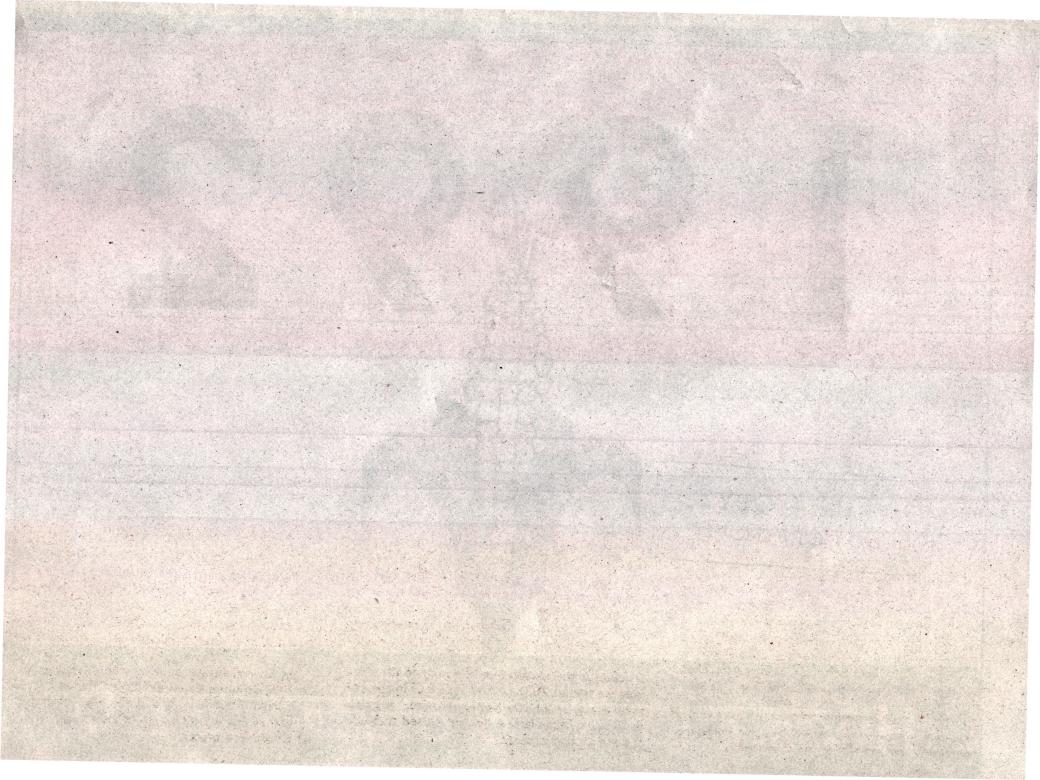
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Michigan Corn Production

HYBRIDS COMPARED



MICHIGAN CORN PRODUCTION

# HYBRIDS COMPARED 1992

By: Keith Dysinger, Mervin Chamberlain, Richard H. Leep, and Dale D. Harpstead\*

ybrid corn trials are conducted each year by the Department of Crop and Soil Sciences, Michigan Agricultural Experiment Station, in cooperation with the Cooperative Extension Service, 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 1991 trials produced 42 bushels more per acre than the average of 311 hybrids tested (Table A) and 81 bushels more than the lowest yielding hybrids.

Twelve trial locations contained 21 tests. Average yield of all hybrids grown in Zone I was 131, Zone II was 173, Zone III was 196, and Zone IV was 115. The driest hybrids at harvest contained 3 percent less moisture than the average and 7 percent less moisture than the highest moisture hybrids tested. Stalk breakage averaged 11 percent for the hybrids with the highest amount of stalk lodging, 3 percent for the average and .3 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 20 presents a list of all hybrids planted in the 1991 trials. At the 13 locations, 311 hybrids from 38 seed companies were tested as 1595 entries. Company names used in association with hybrid numbers refer to the brand. The numbers are the companies' designations.

#### Methods

The major changes made in the testing methods employed in 1990 were continued in the 1991 season. Three locations were identified in each of the 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 grouped according to the maturity ratings provided by the seed companies.

Two-row plots are used. Plots are 22 feet long with a 30-inch row spacing. The plantings are made at the rate of approximately 28,000 seeds per acre in maturity zones I, II, and III (except at the Mason location in zone III which was planted at 26,000). All plantings in zone IV were made at 24,000 seeds 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.

Stand counts are taken prior to tasseling. Lodging measurements are made prior to harvest. Plots are harvested mechanically for both grain and silage. Grain yields are reported at a standard 15.5 percent moisture; silage yield estimates are based on an air-dried sample. Silage yields were measured in Ingham, Huron, and Missaukee counties (Tables 17, 18, and 19). Trials in Cass, Montcalm, and Mason counties were irrigated. A limited number of hybrids were entered for further evaluation by means of an invitro silage digestibility analysis. This work is being done in cooperation with the Department of Animal Science.

The results obtained from the 1992 silage digestibility trials are presented in Tables 17, 18, and 19. This is first year, preliminary data and should be interpreted with great care. No historical pattern exists relative to the silage digestibility performance of a specific hybrid.

Results of four analyses are presented. They are:

- DMD = Dry matter digestibility. This has been shown to be highly related to results from animal digestibility trials and to the best way to compare digestibility of a large number of samples.
- 2. FD = Fiber digestibility. This is related to animal dry matter intake for the forage.

These procedures measure digestibility of dry matter or fiber by inoculating the forage (with bacteria harvested from the rumen of a cow) in a flask. The sample is incubated for 30 hours as this is the average retention time of fiber in the rumen of a lactating dairy cow.

- NDF = Neutral detergent fiber. This is a measure of fiber content and has been related to animal dry matter intake of the forage.
- 4. CP = Crude protein.

<sup>\*</sup>Research assistant, labor technician, and professors, respectively, Crop and Soil Sciences Department.

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

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.

### **Growing Conditions**

All plantings were completed between May 5 and May 20. Planting was timely. Highly favorable growing conditions for both temperature and moisture prevailed from planting throughout the growing season in nearly all areas of corn production. The most notable exception was in the southeastern part of Michigan typified by the Monroe county location in Zone I. Corn in this area was severely damaged by mid and late season drought. Yields were greatly reduced and highly variable. Drought in southeastern Michigan was largely responsible for the somewhat lower estimated average yield of 112 bushels per acre made by the Michigan Crop Reporting Service, down from 115 bushels in 1990.

The area harvested for silage has been estimated at 350,000 acres. Average silage yields were not available at time of publication.

### How to Use This Bulletin

One-, two-, and three-year averages are presented for all hybrids tested during 1991, 1990, and 1989 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).

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.

Moisture content was determined from shelled grain samples at all locations harvested for grain and from chopped silage (fodder plus grain) in the silage trials.

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

Two or more plots of the same hybrid in the same field may produce somewhat different results 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 form 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.



Corn Maturity Zones and Locations (\*) of Trials

#### **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 mature when moisture reaches about 32 percent in the grain or 38 percent in the ear.

#### 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. 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 dryweight 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.

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 1992

- Plant early.
- Plant early- to medium-maturing hybrids.
- Harvest early—during October. Weather problems and harvest losses increase with later harvest.

Table A. Average, highest, and lowest grain yield, moisture content, and stalk lodging at 12 locations in 1991

		No. of	Bu	shels per A	cre		% Moisture		%	Stalk Lodgi	ng
County-Loca	tion	Hybrids	Average	Highest	Lowest	Average	Highest	Lowest	Average	Highest	Lowest
	Early Late	74 78	91 110	127 153	36 70	18 21	21 233	16 18	3 4	9 10	0
	Early Late	74 78	121 106	164 156	79 66	19 22	24 27	16 19	1 1	4 3	0
	Early Late	74 78	173 186	216 236	127 146	17 19	20 21	14 17	10 4	23 18	2
Average – Zon	e 1		131	175	87	19	23	17	7	11	0.5
	Early Late	78 73	198 205	229 246	155 163	19 22	22 26	16 19	3	9	0
	Early Late	78 73	135 177	212 235	77 105	18 20	22 24	15 17	2 2	12 6	0
T	Early Late	78 73	161 165	190 191	132 119	20 24	24 27	16 20	1	4 4	0
Average – Zon	e 2		173	217	125	21	24	17	2	7	0
	Early Late	78 58	183 184	215 232	134 136	19 22	22 27	17 19	1 2	15 6	0
Montcalm –	Early Late	78 58	209 214	258 249	160 188	19 21	21 23	17 18	3	7 9	0 0
	Early Late	78 58	188 198	241 238	120 173	23 28	29 37	20 22	4 3	41 6	0
Average – Zon	e 3		196	239	152	22	27	19	2	14	0
Alpena		53	98	124	80	28	38	21	5	11	1
Grand Travers	e	53	121	153	100	20	25	17	4	10	0
Menominee		57	126	176	94	23	29	17	11	24	1
Average — Zon	e 4		115	151	92	24	31	18	7	15	0.5
Average - All	Zones	3	159	201	117	21	25	18	3	11	0.3

 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 1992**

Production of hybrid seed corn in 1991 was highly favorable. Average temperatures and more timely rains in most seed production areas resulted in high quality seed. Supplies of most hybrids should be adequate for planting in 1992.

Table B. Precipitation, temperature, and growing degree day summary

		M	ny	Ju	ne	Jul	ly	August		
Location/Zone	. •	AVE.	DEV.	AVE.	DEV.	AVE.	DEV.	AVE.	DEV.	
Monroe/1	TEMP	66.2	6.9	71.9	2.6	74.0	0.6	72.6	0.8	
	PPT	4.50	1.51	1.82	- 1.78	1.30	- 1.55	3.75	0.7	
	GDD	532	177	642	64	720	10	682	12	
Branch/1	TEMP	65.4	7.6	70.8	3.6	73.0	2.2	70.8	1.6	
	PPT	3.69	0.66	1.14	- 2.59	2.31	- 1.70	1.75	- 1.6	
	GDD	514	172	615	80	700	54	630	28	
Cass/1	TEMP	67.6	8.7	73.9	5.7	75.2	3.6	73.7	3.5	
	PPT	3.80	0.73	0.53	- 3.31	2.67	- 1.67	3.72	0.30	
	GDD	577	198	697	138	752	91	714	87	
Kent/2	TEMP	64.6	7.2	71.2	4.1	72.4	1.0	70.6	1.1	
	PPT	2.16	- 0.75	1.76	- 2.10	6.24	3.22	3.78	0.64	
	GDD	515	180	634	104	694	40	636	26	
Ingham/2	TEMP	64.0	6.9	69.6	2.5	71.6	0.9	69.6	0.6	
	PPT	1.57	- 1.00	2.78	- 0.22	3.01	0.23	3.38	0.34	
	GDD	510	177	598	73	671	31	608	7	
Saginaw/2	TEMP	63.2	6.3	69.5	2.8	69.4	- 2.8	70.2	1.3	
	PPT	3.99	1.54	1.50	- 1.27	3.47	0.64	5.83	2.7	
	GDD	476	170	596	84	643	2	622	34	
Huron/3	TEMP	61.2	6.1	67.4	2.5	69.5	0.2	69.1	1.3	
	PPT	4.04	1.46	1.54	- 1.34	3.15	0.22	2.88	- 0.1	
	GDD	430	132	541	62	616	14	594	25	
Montcalm/3	TEMP	62.3	4.6	68.3	1.2	69.6	- 1.4	68.1	- 1.2	
	PPT	2.87	- 0.01	2.36	- 1.07	6.36	3.86	1.96	- 1.8	
	GDD	471	120	567	31	611	-35	572	-31	
Mason/3	TEMP	59.9	5.5	69.5	5.7	71.0	2.4	68.7	1.5	
	PPT	2.55	0.08	0.75	- 2.18	5.01	2.83	1.60	- 2.1	
	GDD	419	146	556	106	602	15	602	50	
Alpena/4	TEMP	58.4	6.9	65.6	4.4	67.7	1.7	69.1	4.2	
	PPT	6.26	3.43	0.20	- 2.96	5.16	2.05	3.29	0.00	
	GDD	378	127	515	102	556	23	589	93	
Grand Traverse/4	TEMP PPT GDD	60.5 2.26 415	7.0 - 0.22 142	69.3 0.34 610	6.2 - 2.81 156	70.7 4.60 631	1.9 1.72 44	70.8 1.12 631	3.5 - 1.8 79	
Menominee/4	TEMP	58.2	4.5	66.6	3.9	67.1	- 0.3	68.4	3.4	
	PPT	5.59	2.02	1.81	- 1.91	4.52	0.89	1.24	- 2.0	
	GDD	213	61	453	110	554	34	577	97	

\*TEMP = Temperature (°F)

PPT = Precipitation

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

DEV = Deviations are based on the difference of the observed and the 1951-1980 normals.

TABLE 1 SOUTHERN MICHIGAN ZONE 1 MONROE COUNTY TRIAL ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

		% MOIS	TURE		BUSHEL	S PER		% STAL		
HYBRID (BRAND-VARIETY		1991	YR	YR	1991	YR	YR	1991	YR	YR
GOLDEN ACRES	GA4550	15.9			68.2			0.9	====	====
CROW'S	237	16.2	17		103.4	132		5.6	6	
PIONEER	3733	16.5	17		90.7	125		4.4	4	
STINE CROW'S	1021 179	16.5			70.8 95.0		==	2.8 9.1		==
GREAT LAKES	GL499	16.7			80.8			3.5		
UAPX	15013	16.7			117.0			5.6		
STINE	1015	16.7			90.3			2.8		
PIONEER GREAT LAKES	3573 GL468	16.8	17	18	117.0 71.7	152	158	3.8 0.5	5	4
PIONEER	XO215	17.0			99.5			2.0		
COUNTRYMARK	C502X	17.1			70.7			4.5		
GREAT LAKES ASGROW	GL450 RX578	17.2	18	18	69.8 88.5	119	119	2.4 3.3	4	3
DAIRYLAND	STEALTH-1206	17.2			58.9			4.7		
GOLDEN HARVEST	H-2331	17.2			84.2			3.7		
DEKALB	DK524	17.3	17		100.6	149		4.2	3	,
FUNK'S PIONEER	Exp.3112X 3751	17.3 17.3	16	16	98.5 83.5	117	124	2.8 1.9	4	4
STINE	1077	17.3			101.3			2.4		
GOLDEN HARVEST	H-2349	17.3			101.6			4.2		
FUNK'S JACOUES	G-BRAND 4385	17.5			86.1			5.0		
AMCORN	4770 PSX7450	17.5 17.5	19		57.9 75.1	114		4.7 2.6	3	
GUTWEIN	2390	17.6	==		104.7			5.1		
CROW'S	227	17.6	77		88.3			3.3		
CALLAHAN	C748 3527	17.6	19		105.8	133		3.2	3	
DEKALB	DK535	17.7 17.8	18	18	98.5	139	134	2.8	2	2
CALLAHAN	27199X	17.9			90.7	7-		3.0	<u>-</u> -	
CROW'S	414	18.0			87.5			5.1		
FUNK'S COUNTRYMARK	Exp. 4145X C565X	18.1	19	20	102.4 83.9	137	141	1.9	4	4
CALLAHAN	24448X	18.2			90.4	'	141	0.5		
FUNK'S	G-BRAND 4393	18.3			89.1			2.9		
GRIES	GSF-4103	18.3	==		84.7			3.1		
TOP FARM GREAT LAKES	TFsx1104A GL536	18.3			112.4			5.1 3.3		
GREAT LAKES	GL577	18.4			35.7			2.9		-
RENK	RK702	18.4	20	19	95.5	120	125	2.8	3	2
AMCORN	PSX5757	18.5	==	== .	82.1			3.7	==	4
PARKER TOP FARM	350 TFsx1107	18.6			92.8 86.9	==		4.9		
GOLDEN HARVEST	H-2465	18.6	20		98.8	144		6.0	5	
DEKALB	DK550	18.7	20		101.0	·137		3.8	2	
SUPER CROST	2989	18.7			68.7			5.2		
PIONEER PROVICO	3417 PRO811	18.7 18.7	20 19		74.3	140		0.5 3.1	1 2	
GOLDEN HARVEST	H-2485	18.7			71.7			2.8		
KING AGRO	GG1008A	18.8	21		87.4	137		2.5	4	
PIONEER	X9310	18.9	7.0		74.3	126		0.5	2	
CALLAHAN BLANEY	C759 B506	18.9	19		81.3 80.0	136		1.9		
PIONEER	3475	19.0	19	19	84.7	120	130	3.6	4	3

HYBRID		% MOIS		3	BUSHEL		ACRE		K LOI	DGING
(BRAND-VARIETY		1991	YR	YR	1991	YR	YR	1991	YR	YR
BLANEY PAYCO DAIRYLAND TERRA AMCORN	B603 811 STEALTH-1112 TR1060 PSX9009	18.5 18.9 19.2 19.4 19.4	20		97.4 78.7 105.7 118.8 104.3	160	149	4.7 5.3 4.7 3.8 1.9	  6	4
BLANEY GRIES DYNA-GRO *CROW'S AMCORN	B608 GSF-6110 5410 488 PSX9292	19.5 19.5 19.5 19.5	20 20 20 21	  20 21	121.5 113.6 100.8 139.9 98.9	138 168 131	161 135	9.5 5.9 7.0 1.9 2.4	6 4 5	  3 5
CARGILL TERRA RENK *PAYCO DYNA-GRO	SX269 TR1040 RK873 829 5470	19.6 19.6 20.0 20.0 20.1	21   21		70.0 80.6 105.1 136.0 111.1	125   156	==	0.9 3.8 2.4 3.4 2.8	3	
ASGROW PRAIRIE STREAM GOLDEN HARVEST CALLAHAN *WOLVERINE	RX706 SX420 EX545 27148X W167	20.1 20.1 20.1 20.1 20.2	20	21  	102.4 129.4 126.2 124.7 138.5	146	147	1.9 1.4 6.7 2.8 2.3	4	2   
PRO-SEED BLANEY PRAIRIE STREAM CROW'S RUPP	XS1091 B609 SX475 449 XR1774	20.2 20.3 20.3 20.3 20.4	22 21	=	113.2 96.1 93.5 97.2 102.5	134 138		4.5 6.2 5.3 1.4 3.5	4 3	
*RENK SUPER CROST GOLDEN ACRES COUNTRYMARK GREAT LAKES	RK721 4366 GA7141 C682X GL586	20.5 20.6 20.6 20.6 20.7	20	20	152.5 109.0 113.0 82.6 97.2	179	167	3.8 4.9 4.4 2.9 2.3	3	2   
TERRA RENK PROVICO PROVICO CARGILL	TR1090 RK803 PRO920 PRO900 6227	20.7 20.7 20.8 20.8 20.8	23 22  22	23  21	110.2 128.1 100.3 101.9 113.6	140 144  152	144	3.8 3.4 4.3 4.4 4.3	3 5  5	3  3
RUPP GOLDEN HARVEST GUTWEIN PIONEER BECK'S	XR1808 H-2532 2650 3379 66X	20.8 20.8 20.9 20.9 20.9	22 22 22 22	21 21 21 22	121.2 91.1 101.6 131.0 88.8	142  163 141	153 166 144	2.4 5.1 4.3 3.3 4.2	 4  3 5	 4  2 4
CALLAHAN *SUPER CROST STINE KING AGRO CARGILL	24459X 5460 1116 K647 7877	20.9 21.0 21.0 21.0 21.0	21 23 22	23 23	104.9 142.4 118.6 102.5 125.1	153 148 162	139 154	3.8 2.9 4.8 3.8 2.9	4 4 3	  3 3
ASGROW CROW'S GRIES DAIRYLAND PARKER	RX745 498 GSF-635 DX-1110 63	21.1 21.1 21.2 21.2 21.2	22		111.6 113.4 121.2 113.3 122.4	139		7.2 3.8 4.4 1.9 6.1	3	
BECK'S GÖLDEN ACRES TERRA DAIRYLAND *PIONEER	63X GA7149 TR1125 DX-1014	21.2 21.3 21.3 21.3 21.4	23	=	97.4 126.1 110.4 107.8 137.8	138	=======================================	2.8 4.6 2.9 4.5 1.0	-4  	

(continued below)

(continued below)

		% MOIS			BUSHEL			% STAL			
HYBRID (BRAND-VARIETY	)	1991	YR	YR	1991	YR	YR	1991	YR	YR	==
CROW'S CALLAHAN GOLDEN ACRES *GEN-TECH PROVICO	210 27188X GA6839 1070 PRO880	19.1 19.2 19.4 19.5	  20		92.8 91.4 72.8 119.5 95.8	   139	=	5.1 2.8 4.6 5.9 2.7		=======================================	
*NORTHRUP KING ANDERSONS GREAT LAKES *GUTWEIN *PRO-SEED	N6330 PSX380 GL583 2484 XS1043	19.6 19.6 19.7 19.8 19.8	20 20 		113.0 107.4 111.0 112.1 127.2	146 139  	=	2.8 3.9 4.7 2.4 5.6	4 5 	==	
BECK'S COUNTRYMARK BECK'S *ANDERSONS *BECK'S	57X C660X 58X PSX370 54XA	19.8 19.9 19.9 20.0 20.0	21 21  21 20	20	77.9 96.2 79.8 127.4 115.1	125 119  151 151	132 	1.9 2.5 0.0 2.5 4.4	3  3 3	3	
PIONEER CALLAHAN PRO-SEED *STINE	3394 C764 xs1062 1128	20.1 20.2 20.6 20.6	21	21	98.1 89.5 108.6 116.0	139	143	4.2 1.0 4.3 2.8	2		
AVERAGE		18.3	19	19	91.2	134	134	3.4	3	3	==
RANGE		15.9 TO 20.6	16 TO 21	16 TO 21	35.7 TO 127.4	114 TO 152	119 TO 158	0.0 TO 9.1	TO 6	TO 4	
LEAST SIGNIFICA DIFFERENCE COEFFICIENT OF		.9	====		20.2						==

HYBRID		% MOIS	TURE 2	3	BUSHEI	LS PER	ACRE	% STAI	K LO	DGING
(BRAND-VARIET)	()	1991	YŔ	YR	1991	YR	YR	1991	YŔ	YR
PROVICO CARGILL CARGILL FUNK'S BLANEY	PRO970 7697 7993 G-BRAND 4472 B702wx	21.4 21.4 21.6 21.8 21.9	24  23 22 24	24 	109.6 121.3 111.8 119.8 94.5	150  152 150 146	145	1.7 0.9 6.5 3.3 2.4	3 -4 2 2	3
PIONEER GOLDEN HARVEST PIONEER UAPX CARGILL	3293 EX447 3241 15014 8027	21.9 21.9 22.1 22.1 22.1	23  24		106.5 125.2 111.7 103.6 92.5	150 131	==	1.9 2.4 2.0 2.8 3.7	 - <u>2</u> - <del>3</del>	=
DAIRYLAND CALLAHAN DAIRYLAND NORTHRUP KING *RUPP	DX-1015 C771 DX-1117 X728 Exp.1-190	22.2 22.2 22.3 22.4 22.4	24	24	103.2 104.0 87.3 88.7 136.2	135	134	2.6 6.2 0.5 4.2 2.3	1 	1
GEN-TECH RENK RUPP *JACQUES TERRA	1101 RK76 XR1884 7970 TR1120	22.5 22.5 22.6 22.8 22.8	24	24  23	97.2 98.1 100.5 143.0 103.1	154  153	154  153	5.5 3.3 5.2 0.5 5.3	4	3 3
CARGILL BECK'S DEKALB	7997 74X DK636	22.9 23.2 23.3	25 25	24	114.0 113.3 110.4	153 156	141	4.8 2.9 1.9	3 2	 
AVERAGE		21.0	22	22	110.2	148	149	3.6	3	3
RANGE		18.5 TO 23.3	20 TO 25	20 TO 24	70.0 TO 152.5	125 TO 179	134 TO 167	0.5 TO 9.5	1 TO 6	1 TO

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

	<u>1991</u>	1990	1989
PLANTED	May 20	May 8	May 12
HARVESTED	October 15	November 2	October 28
SOIL TYPE	Metamora-Corunna Sandy Lo	oam Tedrow Loamy Sand	Brookston Loam
PREVIOUS CROP	Corn	Soybeans	Soybeans
POPULATION	27,200	22,900	19,200
ROW WIDTH	30"	30"	30"
FERTILIZER	186-65-218	189-62-191+zinc	166-61-165
SOIL TEST: PH	5.7	5.9	6.3
P	306 (very high)	200 (very high)	84 (high)
K	432 (very high)	263 (high)	311 (very high)

COEFFICIENT OF VARIANCE

FARM COOPERATORS: Jerry Kuehnlein, Monroe (1991, 1990), Gerald Heath, Milan (1989) COUNTY EXTENSION DIRECTOR: Dale Brose, Monroe EXTENSION AGRICULTURAL AGENT: Paul Marks, Monroe

Monroe county experienced extremely dry weather during the 1991 growing season. Poor yields with a very high coefficient of variance (20% & 23%) were obtained. Due to these results, yields are reported as an adjusted yield based on the lattice design. Data with high CV's are not as reliable and should be viewed with extreme caution. Zone 1 averages (in Table 4) do not include Monroe data.

TABLE 2 SOUTHERN MICHIGAN ZONE 1 BRANCH COUNTY TRIAL ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

		% MOIS	TURE	3.	BUSHEL	S PER	ACRE	% STAL	K LO	
HYBRID (BRAND-VARIETY		1991	YR	YR	1991	YR	YR	1991	YR	YR
UAPX	15013	16.5			122.7			1.0		
GREAT LAKES	GL450	16.6			125.2			1.5		'
AMCORN	PSX7450	16.6	20		78.6	141		0.6	. 0	
GREAT LAKES GOLDEN HARVEST	GL499 H-2331	16.7		==	103.3	==	==	0.5		
PIONEER	X0215	16.9			135.7			0.0		
STINE	1015	16.9			121.7			2.8		
DEKALB	DK524	17.0	19	19	130.5	157	160	0.5	1	2
GOLDEN ACRES	GA4550	17.1			95.4			0.0		
FUNK'S	Exp.3112X	17.2			94.7			1.0		
PIONEER	3733	17.3	19	"	143.4	162		0.5	1	
CROW'S PIONEER	179 3527	17.3	21		113.2 150.3	172		3.9	1	==
CROW'S	237	17.4	20		137.9	154		1.0	i	
DEKALB	DK535	17.5	20	20	116.4	153	164	1.9	ī	2
CROW'S	414	17.6			101.4			1.0		
FUNK'S	G-BRAND 4393	17.7			124.4			1.5		
GREAT LAKES	GL468	17.7			119.3			1.1		
PIONEER	X9310	17.7		•	115.0			0.0		
STINE	1021	17.7			110.0			0.0		
GOLDEN HARVEST	H-2349	17.7			112.8			0.9		
DAIRYLAND PIONEER	STEALTH-1206 3573	17.8 17.9	20	20	89.8 157.8	179	167	3.6	3	3
ASGROW	RX578	17.9	21	21	119.8	139	148	2.0	ĭ	ĭ
PROVICO	PRO811	17.9	21	, <del></del> ,	126.8	156		0.6	ĩ	
FUNK'S	G-BRAND 4385	18.1			111.8			1.0		
GUTWEIN	2390	18.2			130.9		\	0.0		
CROW'S	227	18.2			125.8			1.9		-
AMCORN	PSX5757	18.2		18	126.2	142	150	0.9	1	1
PIONEER	3751	18.3	19	18	118.2	142	120	1.0		
CALLAHAN	24448X	18.3			120.7			1.0		
TOP FARM GREAT LAKES	TFsx1104A GL577	18.4 18.7			121.2 83.5			1.0		
BLANEY	B506	18.8			106.1			0.0		
GRIES	GSF-4103	18.9			127.5			1.2		
RUPP	XR1739	18.9	22		129.5	162		0.0	0	
CROW'S	210	18.9			112.0			1.4		
JACQUES COUNTRYMARK	4770 C502X	19.0			122.6 99.8			0.0		==
PIONEER	3475	19.1	21	21	110.0	141	148	0.5	1	1
COUNTRYMARK	C660X	19.1	24	23	131.6	162	175	1.1	1	1
PIONEER	3394	19.2		23	164.2		7-	1.0		
STINE	1077	19.2			117.4			0.5		
GREAT LAKES	GL536	19.3			118.8		´	0.5		
CALLAHAN	C759	19.3	23		112.1	144		0.0	0	
SUPER CROST	2989	19.4			125.2			0.5		
PRO-SEED	XS1043	19.4		21	137.5	144	157	0.0		
RENK TOP FARM	RK702 TFsx1107	19.4 19.4	22	21	132.2 114.1	144	157	0.5 2.0		0 .
GOLDEN HARVEST	H-2465	19.5	22		127.3	160		1.0	1	<del></del> -
CALLAHAN	27199X	19.5			133.7			0.5		
COUNTRYMARK	C565X	19.6	23	22	123.3	152	156	0.5	1	1
DEKALB	DK550	19.7	23		103.1	137		1.5	2	
GREAT LAKES	GL583	19.7			119.5			0.5	2	

HYBRID	************	* MOIS	TURE 2	3	BUSHEL	S PER	ACRE 3	% STAI	K LO	DGING 3
(BRAND-VARIETY DYNA-GRO BLANEY	5410 B603	19.0	23		1991 108.5 122.8	140	YR	1991 0.5 1.4	YR 1	YR
DAIRYLAND WOLVERINE PROVICO	STEALTH-1112 W167 PRO920	19.9 20.0 20.1	25	=	80.0 100.5 97.0	130	=	0.0 0.5 0.0	1	==
TERRA *AMCORN CROW'S PAYCO BLANEY	TR1090 PSX9292 498 811 B609	20.2 20.2 20.3 20.3 20.4	24 25 	23	117.1 132.1 124.3 69.6 101.2	166 153	173 	1.0 1.5 2.0 0.0	 1 1 	
ASGROW DAIRYLAND GRIES TERRA *DAIRYLAND	RX706 DX-1014 GSF-6110 TR1125 DX-1110	20.4 20.4 20.5 20.5 20.5	24	24  	110.1 111.5 87.6 122.9 134.0	160  	166   	1.4 0.5 0.5 1.0	1 == ==	2  
GOLDEN HARVEST AMCORN *PIONEER GOLDEN ACRES PARKER	EX545 PSX9009 3379 GA7149 63	20.5 20.5 20.6 20.6 20.8	24	23	108.3 106.9 141.2 114.3 96.1	162 	173	0.5 2.5 1.0 0.5 0.6	1	1
RENK CARGILL BLANEY PRAIRIE STREAM PAYCO	RK721 6227 B608 SX420 829	20.9 21.0 21.1 21.2 21.3	24 24 	23 24  	123.8 111.3 120.8 117.4 110.9	164 153  	176 159  	0.5 0.5 1.0 0.5 1.0	0  	0 1  
TERRA *RENK NORTHRUP KING *CROW'S CARGILL	TR1040 RK803 X728 488 SX269	21.3 21.4 21.5 21.5 21.6	25  25 25 24	25  24 	98.4 130.2 100.7 143.7 122.5	148  169 157	153 170	1.5 1.0 0.5 0.0 1.4	1 1 1	 2  2
GOLDEN ACRES *GOLDEN HARVEST RENK BECK'S CARGILL	GA7141 H-2532 RK873 66X 7697	21.6 21.6 21.7 21.7 21.8	25 25 25	24 25	122.9 126.2 91.8 67.1 75.9	170  129	168 147	1.9 1.4 1.0 0.5 1.0	 1  2 	 2  2
DYNA-GRO CROW'S GRIES SUPER CROST RENK	5470 449 GSF-635 4366 RK76	21.9 21.9 22.0 22.1 22.1	24 26  27	   25	115.9 89.3 97.3 120.1 102.4	160 127  143	   164	0.5 0.9 0.5 1.0 0.0	. 0  0	   1
CALLAHAN PROVICO RUPP BECK'S GEN-TECH	24459X PRO970 XR1808 63X 1101	22.1 22.2 22.2 22.2 22.3	26 26 26	  25	109.1 96.6 107.0 94.6 110.7	143 148	  156	0.5 1.0 0.0 0.0 0.5	- <u>-</u> - <u>1</u> - <u>0</u>	
TERRA KING AGRO STINE DEKALB *PIONEER	TR1120 K647 1116 DK636 3293	22.3 22.4 22.5 22.6 22.6	26 26 24 27	25 25  25	99.9 93.5 118.7 97.8 152.4	136 146 161 145	145 141  149	0.5 0.5 1.6 0.0	2 1 2 0	2 1  1
SUPER CROST PROVICO GREAT LAKES FUNK'S *PIONEER	5460 PRO900 GL586 G-BRAND 4472 3241	22.7 22.7 22.8 22.9 22.9	25 26	=======================================	85.0 118.7 103.4 70.1 155.7	123 172		0.5 2.1 1.0 0.5 1.5	  1	=======================================

		& MOIS				S PER		& STALK LODGING			
HYBRID (BRAND-VARIETY	)	1991	YR	YR	1991	YR YR	YR	1991	YR	YR	
*PIONEER *ANDERSONS GOLDEN HARVEST CALLAHAN GUTWEIN	3417 PSX370 H-2485 C748 2484	19.8 19.9 19.9 20.0 20.1	23 23 	= = = ,	146.3 137.9 122.1 104.7 113.3	175 170  145	=======================================	0.5 0.5 2.0 1.9	2	=======================================	
PARKER *CALLAHAN CALLAHAN PROVICO GOLDEN ACRES	350 27188X C764 PRO880 GA6839	20.1 20.1 20.2 20.3 20.4	24 23	24	118.2 144.0 121.9 130.3 124.7	158 160	146	1.5 0.0 0.5 0.0	 0 1		
BECK'S FUNK'S GEN-TECH KING AGRO ANDERSONS	54XA Exp.4145X 1070 GG1008A PSX380	20.4 20.9 20.9 21.2 21.4	23  25 25	22   24	129.9 117.3 120.4 125.5 120.6	164  154 139	177    151	0.5 0.5 1.6 0.5 1.0	1 1 1	0    1	
BECK'S STINE BECK'S PRO-SEED	58X 1128 57X XS1062	22.6 22.8 23.4 23.7	26	Ξ	126.4 110.1 103.3 107.1	128	=	1.0 0.5 0.0 0.0	1	= =	
AVERAGE		18.9	22	21	120.8	154	158	0.9	1	1	
RANGE		16.5 TO 23.7	19 TO 26	18 TO 24	78.6 TO 164.2	128 TO 179	146 TO 177	0.0 TO 3.9	0 TO 3	0 TO 3	
LEAST SIGNIFICA DIFFERENCE COEFFICIENT OF	VARIANCE	.9 149			15.9						

HYBRID		& MOIS	the should be should be should be	3	BUSHEL	dendrock-rebackers	adoption to the last			DGING
(BRAND-VARIETY	)	1991	YR	YR	1991	YR	YR	1991	YR	YR
TERRA DAIRYLAND CALLAHAN UAPX CARGILL	TR1060 DX-1015 C771 15014 7993	22.9 23.1 23.2 23.3 23.3	25   27	24   26	113.3 101.1 94.1 102.2 80.3	150   140	160   154	0.5 1.0 1.0 0.5 0.5	1   1	1   1
RUPP *PIONEER JACQUES RUPP GUTWEIN	XR1774 3357 7970 XR1884 2650	23.3 23.5 23.6 23.7 23.9		=======================================	106.4 134.2 103.4 125.1 101.3	=======================================	=	2.1 1.5 1.5 1.4 0.0	=======================================	=======================================
PRO-SEED ASGROW DAIRYLAND *GOLDEN HARVEST CALLAHAN	XS1091 RX745 DX-1117 EX447 27148X	24.0 24.1 24.1 24.1 24.1	28	27 27	81.6 88.1 86.1 142.3 121.0	123 	136	1.0 0.0 0.0 2.8 1.0	 0 	1
CARGILL PRAIRIE STREAM BLANEY RUPP COUNTRYMARK	8027 SX475 B702wx Exp.1-190 C682X	24.2 24.2 24.6 24.6 24.7	28 26 28 	26    	66.2 88.4 67.9 90.7 114.5	128 133 126 	134	1.0 1.0 0.5 0.0	2 2 2 	2
CARGILL CARGILL BECK'S	7877 7997 74X	24.7 25.7 27.1	27 31	26  	76.9 94.3 88.9	132 133	144	0.0 0.5 1.5	0 -1	0
AVERAGE		22.1	26	25	105.8	146	156	08	1	1
RANGE		19.0 TO 27.1	23 TO 31	23 TO 27	66.2 TO 155.7	123 TO 172	134 TO 176	0.0 TO 2.8	0 TO 2	0 TO 2
LEAST SIGNIFICA DIFFERENCE COEFFICIENT OF		1.4			19.4					

*SIGNIFICANTLY	BETTER	THAN	AVERAGE	YIELD	IN	199
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PLANTED	May 12	May 7	May 4
HARVESTED	October 14	October 31	October 27
SOIL TYPE	Teasdale Fine Sandy Loam	Sibewa Loam	Sibewa Loam
PREVIOUS CROP	Corn	Corn	Corn
POPULATION	26,600	21,700	18,500
ROW WIDTH	3011	30"	30"
FERTILIZER	99-0-90+sulfur	186-55-150	185-74-180
SOIL TEST: PH	6.1	5.4	5.9
P	114 (very high)	220 (very high)	186 (very high)
K	556 (very high)	438 (very high)	303 (very high)

FARM COOPERATORS: Neil Carpenter, Quincy (1991), David Labar, Union City (1990, 1989) 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-1991, 1990, 1989

		% MOIS	TURE		BUSHEL	S PER	ACRE		K LO	DGING
HYBRID (BRAND-VARIETY	).	1991	YR	YR	1991	YR	YR	1991	YR	YR
GOLDEN HARVEST CROW'S JACQUES CROW'S	H-2349 179 4770 237 XO215	14.1 14.2 14.7 14.7	16		155.9 150.5 148.5 204.2 194.4	170		10.0 14.9 15.9 9.4 5.1	7	=======================================
GOLDEN ACRES STINE STINE GOLDEN HARVEST GREAT LAKES	GA4550 1021 1015 H-2331 GL450	15.2 15.2 15.2 15.2 15.3	=======================================		126.8 138.3 137.2 137.7 148.0		=	12.3 5.9 14.8 13.9 22.7	=	=======================================
PIONEER PIONEER FUNK'S ASGROW RENK	3751 X9310 G-BRAND 4385 RX578 RK702	15.3 15.3 15.5 15.5	16  16 17	16  17 18	167.2 170.1 160.2 177.8 171.9	158  160 165	158  166 163	6.9 13.4 8.3 8.1 9.0	6  5 7	4  5 5
AMCORN GREAT LAKES PIONEER CROW'S GREAT LAKES	PSX5757 GL536 3733 414 GL499	15.5 15.6 15.7 15.7	16	=======================================	193.2 173.4 179.2 139.5 154.8	174		16.6 11.3 12.1 13.0 6.6	10	=======================================
PROVICO FUNK'S CALLAHAN UAPX CROW'S	PRO811 G-BRAND 4393 C748 15013 227	15.8 15.9 15.9 16.0 16.0	17 17 	== .	174.7 174.3 197.9 148.4 140.6	171 187 	=======================================	9.3 2.3 9.3 9.8 18.4	5 -6	==
*AMCORN DEKALB GRIES GREAT LAKES *PIONEER	PSX7450 DK550 GSF-4103 GL468 3573	16.0 16.1 16.1 16.1 16.1	18 18  17	18   17	194.3 186.8 127.3 160.8 215.7	185 180  207	183   197	2.0 2.9 9.4 10.4 13.2	3 3  8	2   5
STINE GOLDEN HARVEST BLANEY TOP FARM CALLAHAN	1077 H-2465 B506 TFsx1107 24448X	16.1 16.1 16.2 16.2	18	18	170.8 177.7 172.1 153.1 163.5	184	179  	17.9 16.3 9.0 8.3 9.5	11	8
CALLAHAN DAIRYLAND COUNTRYMARK DEKALB GUTWEIN	27199X STEALTH-1206 C502X DK524 2390	16.2 16.3 16.4 16.5 16.5	17		190.9 168.7 184.0 170.8 180.6	  179	=	7.7 19.0 10.2 10.0 14.4	8	Ē
TOP FARM GOLDEN ACRES PARKER CALLAHAN *FUNK'S	TFsx1104A GA6839 350 27188X Exp.3112X	16.5 16.6 16.7 16.7	=		180.9 159.4 170.6 181.6 192.0		Ξ	21.3 16.3 13.2 8.8 9.0	=	≣
GREAT LAKES *ANDERSONS CROW'S *BECK'S GOLDEN HARVEST	GL577 PSX380 210 57X H-2485	16.8 16.8 16.8 16.8 16.9	19 20	19 	172.3 190.2 156.4 208.0 164.9	183 202	178  	7.2 5.1 13.4 4.7 11.3	6 5	5 
DEKALB COUNTRYMARK COUNTRYMARK ANDERSONS	DK535 C565X C660X PSX370	17.0 17.0 17.0 17.0	17 18 18 18	17	185.8 148.6 188.2 156.7	180 167 190 182	183	8.3 10.1 10.1 7.1	5 9 6	5 

LATE TRIAL (109	DAY RELATIVE N	MATURIT	Y OR	LATER	(BASED O	N COM	PANY RA	TING)		5
		% MOIS	TURE		BUSHEL			% STAI		
HYBRID (BRAND-VARIETY	9	1991	YR	YR	1991	YR	YR	1991	YR	YR
PROVICO AMCORN GREAT LAKES TERRA PAYCO	PRO900 PSX9009 GL586 TR1040 811	16.8 16.9 17.0 17.0	===	=======================================	189.3 189.6 184.9 156.6 175.8		=======================================	0.5 2.5 4.6 4.0 1.5	===	
BLANEY TERRA WOLVERINE PAYCO BLANEY	B603 TR1060 W167 829 B609	17.2 17.3 17.4 17.4 17.5	19		194.8 201.6 171.2 186.2 201.9	195	=	3.3 4.7 3.8 6.6 2.4	6	
*PIONEER CROW'S GOLDEN HARVEST CARGILL PRAIRIE STREAM	3379 449 EX545 SX269 SX475	17.5 17.5 17.6 17.7 17.8	19 19  19 20	19 21  20	210.1 171.1 195.9 157.2 182.8	186 177  172 180	193 177  180	3.5 5.3 2.5 11.6 5.7	3 4  8 4	2 3  7
RENK PRO-SEED *DAIRYLAND *CROW'S DAIRYLAND	RK873 XS1091 DX-1110 488 STEALTH-1112	17.8 17.9 17.9 17.9 18.0	20	20	169.7 185.9 216.4 211.6 150.9	194	192	3.6 7.1 2.8 18.4 1.9	10	
ASGROW STINE *CARGILL CALLAHAN UAPX	RX706 1116 6227 27148X 15014	18.1 18.1 18.1 18.1 18.2	19 19 20	20 21	195.8 176.2 209.6 188.3 175.5	192 181 198	187 198	3.3 1.0 1.9 2.5 2.4	3 3 2 	3 2 
*TERRA *GOLDEN HARVEST RENK DYNA-GRO PROVICO	TR1090 EX447 RK721 5410 PRO920	18.2 18.2 18.3 18.4 18.4	20 19 21	20	211.9 211.3 166.1 184.8 186.7	172 171 176	174	3.7 3.0 3.8 4.2 4.0	 4 5 4	3
PRAIRIE STREAM GOLDEN ACRES GRIES BLANEY COUNTRYMARK	SX420 GA7141 GSF-6110 B608 C682X	18.4 18.5 18.6 18.7 18.7			199.6 167.2 194.3 179.7 191.4	==		3.9 2.9 3.3 4.0 3.0	==	
DAIRYLAND AMCORN BECK'S GOLDEN ACRES DYNA-GRO	DX-1014 PSX9292 66X GA7149 5470	18.7 18.7 18.7 18.8 18.8	20 20  21		181.2 190.1 159.6 181.4 178.7	187 164  185	=	2.6 4.2 7.6 5.8 2.6	5 8  2	
RUPP SUPER CROST GEN-TECH BECK'S GRIES	XR1774 4366 1101 74X GSF-635	18.8 18.9 18.9 18.9 19.0	  22	=======================================	188.2 167.7 193.1 199.8 172.1	  202	=	1.9 8.4 2.5 3.0 3.9	  4	
TERRA CROW'S RENK *RUPP *ASGROW	TR1125 498 RK803 XR1808 RX745	19.0 19.0 19.1 19.1 19.2	21 22 	  22 	146.4 173.1 149.0 209.5 216.3	164 150	158 	5.1 6.6 5.1 2.4 2.0	5 4 	
*GOLDEN HARVEST *PIONEER PARKER FUNK'S CARGILL	H-2532 3293 63 G-BRAND 4472 8027	19.2 19.3 19.4 19.5 19.5	21  21 22	21   23	235.9 213.6 181.3 183.2 174.9	224  183 189	222   193	6.7 1.5 3.2 0.5 3.2	5  2 3	5   2

(continued below)

A A CASA CONTRACTOR		% MOIS			BUSHEL			& STAL		
HYBRID (BRAND-VARIET	Y)	1991	YR	YR	1991	YR	YR	1991	YR	YR
*PIONEER *PIONEER CALLAHAN PIONEER *KING AGRO	3417 3527 C759 3475 GG1008A	17.2 17.2 17.3 17.5	18 18 19 17	18	207.5 209.6 154.0 148.4 191.2	195 197 170 156 188	  164	4.7 2.4 6.9 6.0 4.6	3 2 4 6	
*FUNK'S *GUTWEIN *PRO-SEED STINE GREAT LAKES	Exp. 4145X 2484 XS1043 1128 GL583	17.8 17.8 17.8 17.8 17.9	===		190.9 204.8 203.1 181.4 180.4	=		5.3 5.0 4.4 5.7 5.1	==	=======================================
*RUPP *BECK'S CALLAHAN GEN-TECH PROVICO	XR1739 54XA C764 1070 PRO880	17.9 17.9 17.9 18.0 18.0	19 19 19  19	20 20 	212.5 192.9 177.6 176.5 186.7	201 190 185  193	189 171 	14.5 5.2 8.4 12.8 8.9	11 5 6  6	
BECK'S NORTHRUP KING PIONEER PRO-SEED	58X N6330 3394 XS1062	18.0 18.4 18.7 19.6	19 	=======================================	188.5 183.7 177.3 167.9	190		5.7 12.2 4.4 8.5	9 	==
AVERAGE		16.5	18	18	173.4	182	176	9.9	6	. 5
RANGE		14.1 TO 19.6	16 TO 20	16 TO 20	126.8 TO 215.7	156 TO 207	158 TO 197	2.0 TO 22.7	2 TO 11	2 TO 8
LEAST SIGNIFIC DIFFERENCE COEFFICIENT OF		.6	.===:		16.5					

		% MOIS			BUSHEL			% STAL	K LO	
HYBRID (BRAND-VARIET	Y)	1991 -	YR	YR	1991	YR	YR	1991	YR	YF
RENK SUPER CROST JACQUES CARGILL DEKALB	RK76 5460 7970 7697 DK636	19.5 19.6 19.6 19.6	22 .   22	22   22	170.5 174.0 185.7 195.2 169.3	179   179	183    182	3.6 3.1 6.9 2.8 2.5	3 3	3
PIONEER RUPP CARGILL *PIONEER GUTWEIN	3357 Exp.1-190 7877 3241 2650	19.7 19.7 19.8 19.9 20.0	 22 22	22	202.9 178.8 197.3 217.9 180.9	210 203	202	2.5 2.3 7.3 2.6 4.6	5 2	5
PROVICO BECK'S CARGILL DAIRYLAND DAIRYLAND	PRO970 63X 7993 DX-1117 DX-1015	20.0 20.0 20.1 20.1 20.1	22 22 22 23	22 22 22 23	158.4 186.2 199.9 150.0 190.8	171 180 201 166	191 200 170	4.1 2.4 5.2 2.1 2.1	4 2 4 5	2 4
RUPP NORTHRUP KING KING AGRO TERRA CALLAHAN	XR1884 X728 K647 TR1120 24459X	20.1 20.2 20.3 20.3 20.4	 22 22	22	181.3 193.0 159.0 208.1 183.0	169 196	158	1.5 6.2 2.8 1.9	4 4	
CALLAHAN BLANEY *CARGILL	C771 B702wx 7997	20.5 21.2 21.4	23	=	205.2 149.6 224.6	172	=	3.0 1.5 3.7	2	
AVERAGE		18.8	21	21	185.9	183	186	3.8	4	4
RANGE		16.8 TO 21.4	19 TO 23	19 TO 23	146.4 TO 235.9	150 TO 224	158 TO 222	0.5 TO 18.4	2 TO 10	TC
LEAST SIGNIFICA DIFFERENCE COEFFICIENT OF		.7			23.6		======	======	====	

<sup>\*</sup>SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

	1991	1990	1989
PLANTED	May 8	May 7	May 5
HARVESTED	October 12	November 1	October 24-25
SOIL TYPE	Oshtemo Sandy Loam	Oshtemo Sandy Loam	Oshtemo Sandy Loam
PREVIOUS CROP	Corn	Corn	Corn
POPULATION	27,100	23,200	20,200
ROW WIDTH	30"	30"	30"
FERTILIZER	214-40-128+sulfur+zinc	139-40-128+sulfur+zinc	214-40-8+sulfur+zinc
SOIL TEST: pH	6.1	6.0	6.8
P	224 (very high)	196 (very high)	200 (very high)
K	497 (very high)	564 (very high)	372 (very high)
IRRIGATION	7 inches	4 inches	3 inches

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

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## TABLE 4 SOUTHERN MICHIGAN ZONE 1 AVERAGE OF BRANCH & CASS COUNTY TRIAL + ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

		& MOIS			BUSHEL	S PER	ACRE	& STAI	K LOI	
HYBRID (BRAND-VARIETY		1991	YR .	YR	1991	YR YR	YR YR	1991	YR	YR
CROW'S	179	15.8			131.9			9.4		
GOLDEN HARVEST	H-2349	15.9			134.4			5.5		
GREAT LAKES	GL450 XO215	16.0	=	=	136.6	-		12.1	=	==
GOLDEN HARVEST	H-2331	16.0			165.1 129.3		==	7.2		
STINE	1015	16.1			129.5			8.8		
CROW'S	237	16.1	18	-	171.1	163		5.2 6.2	5	
GOLDEN ACRES GREAT LAKES	GA4550 GL499	16.2	=	==	111.1	==		6.2	==	
UAPX	15013	16.3		\	135.6			5.4		
AMCORN	PSX7450	16.3	19	19	136.5	157	165	1.3	2 5	2
PIONEER	3733	16.5	17		161.3	166		6.3	5	=
PIONEER STINE	X9310 1021	16.5			142.6			6.7		
ASGROW	RX578	16.7	18	19	148.8	149	151	5.1	4	3
CROW'S	414	16.7			120.5			7.0		
DEKALB FUNK'S	DK524 G-BRAND 4385	16.8	18	18	150.7	170	169	5.3	- 4	3
FUNK'S	G-BRAND 4393	16.8			149.4			1.9		
PIONEER	3751	16.8	17	17	142.7	149	151	4.0	4	3
JACQUES	4770	16.9			135.6			8.0		
GREAT LAKES PROVICO	GL468 PRO811	16.9	19	==	140.1	162		5.8	3	==
AMCORN	PSX5757	16.9	77.		159.7			8.8		
FUNK'S	Exp.3112X	17.0			143.4			5.0		
PIONEER	3573	17.0	18	18	186.8	191	182	8.4	6	5
DAIRYLAND CROW'S	STEALTH-1206 227	17.1	13-	- 11	129.3	==		10.0		==
DEKALB	DK535	17.3	18	18	151.1	166	166	5.1	3	3
PIONEER	3527	17.3	19		180.0	182		1.8	2	
CALLAHAN	24448X 2390	17.3	=	=	142.1	=	<u>-</u>	5.3	=	=
GUTWEIN BLANEY	B506	17.4			155.8			7.2		
GRIES	GSF-4103	17.5			127.4			5.3		
GREAT LAKES	GL536	17.5			146.1			5.9		
RENK TOP FARM	RK702 TFsxll04A	17.5	20	19	152.1 151.1	153	155	10.7	4	3
COUNTRYMARK	C502X	17.7		4-	141.9			6.2		
STINE	1077	17.7		-	144.1	TE SE	-	9.2		
GREAT LAKES	GL577	17.8			127.9			4.1		
TOP FARM GOLDEN HARVEST	TFsx1107 H-2465	17.8	20	20	133.6	172	171	5.2		5
DEKALB	DK550	17.8	20	20	152.5 145.0	159	1/1	8.7	2	
CROW'S	210	17.9			134.2			7.4		
CALLAHAN	27199X	17.9			162.3			4.1		
CALLAHAN	C748 C660X	18.0	19 20	21	151.3	163 168	171	5.6 5.6	4	
SUPER CROST	2989	18.1 18.3 18.3			140.6	100		6.7		
PIONEER	3475	18.3	19	19	129.2	147	152	. 3.3	3	3
COUNTRYMARK	C565X	18.3	20	20	136.0	161	159	5.3	5	4
CALLAHAN PARKER	C759	18.3	20	=	133.1	159		3.5	2	-
RUPP	350 XR1739	18.4	21	21	144.4	179	174	7.4	5	4
GOLDEN HARVEST	H-2485	18.4			143.5	THE REAL PROPERTY.		6.7	St	

A CONTRACTOR		& MOIS			BUSHEL			& STAL	K LOI	OGING
HYBRID (BRAND-VARIETY		1991	YR	yr.	1991	YR YR	YR YR	1991	YR YR	YR
BLANEY	B603	18.2			158.8			2.4		
OLVERINE	W167	18.7			135.9			2.2		
OYNA-GRO	5410	18.7	21		146.7	157		2.4	3	
PAYCO AMCORN	811 PSX9009	18.7	=	=	148.3	=		0.8	==	=
BLANEY	B609	19.0			151.6	5		1.2		
DAIRYLAND PIONEER	STEALTH-1112 3379	19.0	21	21	115.5 175.7	178	182	1.0	2	- 2
COLDEN HARVEST	EX545	19.1			152.1			1.5		
TERRA	TR1090	19.2			164.5			2.4		
DAIRYLAND	DX-1110 TR1040	19.2			175.2			1.7		-
ASGROW	RX706	19.3	21	21	127.5	175	172	2.4	3	3
PROVICO	PRO920	19.3	22		141.9	157		2.0	3 3	
PAYCO	829	19.4			148.6			3.8		
AMCORN GRIES	PSX9292 GSF-6110	19.5	22	22	161.1	172	169	2.9	4	4
CARGILL	6227	19.6	22	22	160.5	176	174	1.2	2	2
DAIRYLAND	DX-1014	19.6			146.4			1.6		
RENK	RK721	19.6	21	21	145.0	171	171	2.2	2	2
CARGILL COLDEN ACRES	SX269 GA7149	19.7	22	21	139.9	163	174	6.5	5	- 5
CROW'S	488	19.7	22	21	177.7	183	178	9.2	6 3	5
CROW'S	449	19.7	22	23	130.2	153	161	3.1	3	2
CROW'S	498	19.7			148.7	158		4.3		
PROVICO	PRO900 TR1125	19.8	TI.		154.0 134.7			1.3	==	
PRAIRIE STREAM	SX420	19.8			158.5			2.2		
RENK	RK873 B608	19.8		==	130.8			2.3		
GREAT LAKES GOLDEN ACRES	GL586 GA7141	19.9		==	144.2	==		2.8	==	==
PARKER	63	20.1			138.7			1.9		
TERRA	TR1060	20.1	22	22	157.5	175	168	2.6	4 5	3 4
BECK'S	66X	20.2			113.4		155	4.1		
STINE	1116 RK803	20.3	22	23	147.5	170	153	1.3	2 2	2
DYNA-GRO	5470	20.4	24	-	147.3	173		1.6	2	
GOLDEN HARVEST SUPER CROST	H-2532 4366	20.4	22	-22	181.1	194	191	4.1	4	3
GRIES	GSF-635 1101	20.5	==		134.7			2.2	Ξ	
GEN-TECH CARGILL	7697	20.6			135.6			1.9		
RUPP	XR1808	20.7			158.3			1.2		
JAPX	15014	20.8			138.9			1.5		<u> </u>
RENK NORTHRUP KING	RK76 X728	20.8	24	24	136.5 146.9	165	171	1.8	2	2
PIONEER	3293	21.0		-	183.0			1.0		
PRO-SEED	XS1091	21.0			133.8		`	4.1		
PRAIRIE STREAM	SX475	21.0	23		135.6	156		3.4	3	
PROVICO	PRO970 XR1774	21.1	24	=	127.5	158	=	2.6	3	
BECK'S	63X	21.1	24	23	140.4	162	173	1.2	2	2
CALLAHAN	27148X	21.1	WINDERSON OF	N. 17 CONTROL OF STREET, BUSINESS	154.7	STATE OF STREET	SEASON CONTRACTOR	1.8	1170 0x40 65	

EARLY TRIAL	(108 DAY	RELATIVE	MATTIRTTY	OR	EARLTER	(BASED	ON	COMPANY	RATING

THE PARTY OF THE P		% MOIS	TURE		BUSHEL	S PER	ACRE	% STAL	K LO	
HYBRID (BRAND-VARIET)	7)	1991	YR	YR	1991	YR	YR	1991	YR	YR
*PIONEER GOLDEN ACRES ANDERSONS *PRO-SEED GREAT LAKES	3417 GA6839 PSX370 XS1043 GL583	18.5 18.5 18.5 18.6 18.8	20 20	=======================================	176.9 142.1 147.3 170.3 150.0	187 171	    	2.6 8.4 3.8 2.2 2.8	2 -3 	=======================================
*GUTWEIN *PIONEER *NORTHRUP KING ANDERSONS CALLAHAN	2484 3394 N6330 PSX380 C764	19.0 19.0 19.1 19.1 19.1	21 21 21 21	  21 21	159.1 170.8 164.6 155.4 149.8	174 161 171	165 160	3.0 2.7 7.6 3.1 4.5	6 4 3	  3 3
*PROVICO *BECK'S FUNK'S GEN-TECH *KING AGRO	PRO880 54XA Exp.4145X 1070 GG1008A	19.2 19.2 19.4 19.5	21 21  21	21  	158.5 161.4 154.1 148.5 158.4	174 176  172	185 	4.5 2.9 2.9 7.2 2.6	4 3  4	2
BECK'S STINE BECK'S PRO-SEED	57X 1128 58X XS1062	20.1 20.3 20.3 21.7	23  	=======================================	155.7 145.8 157.5 137.5	164	=	2.4 3.1 3.4 4.3	3  	= = =
AVERAGE		17.7	20	19	147.1	167	165	5.4	4	3
RANGE		15.8 TO 21.7	17 TO 23	17 TO 21	111.1 TO 186.8	147 TO 191	151 TO 185	1.3 TO 12.1	2 TO 6	2 TO 5
LEAST SIGNIFICA	ANT	.5			11.2					

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991 +SECOND AND THIRD YEAR DATA ALSO CONTAIN MONROE COUNTY DATA

LATE TRIAL (109 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING)

		% MOIS	TURE		BUSHEL	S PER	ACRE	% STAL		
HYBRID (BRAND-VARIETY)		1991	YR	3 YR	1991	YR	3 YR	1991	YR	YR
FUNK'S SUPER CROST *GOLDEN HARVEST TERRA CALLAHAN	G-BRAND 4472 5460 EX447 TR1120 24459X	21.2 21.2 21.2 21.3 21.3	23  24 		126.7 129.5 176.8 154.0 146.1	153  170	  166	0.5 1.8 2.9 1.2 1.2	1  3 	  3
*PIONEER KING AGRO JACQUES *PIONEER DAIRYLAND	3241 K647 7970 3357 DX-1015	21.4 21.4 21.6 21.6 21.6	24 24 	23	186.8 126.3 144.6 168.6 146.0	187 158  	149	2.1 1.7 4.2 2.0 1.6	2 3  	2 
ASGROW COUNTRYMARK CARGILL CARGILL RUPP	RX745 C682X 7993 8027 XR1884	21.7 21.7 21.7 21.9 21.9	24 25	24 24 24	152.2 153.0 140.1 120.6 153.2	169 154	170 161	1.0 1.5 2.9 2.1 1.5	 2 2	2 2
CALLAHAN GUTWEIN DAIRYLAND RUPP CARGILL	C771 2650 DX-1117 Exp.1-190 7877	21.9 22.0 22.1 22.2 22.3	25 24	24 24	149.7 141.1 118.1 134.8 137.1	147 170	150 168	2.0 2.3 1.1 1.2 3.7	2  3	 2  3
BLANEY BECK'S CARGILL	B702wx 74X 7997	22.9 23.0 23.6	25 26 	, <u>=</u>	108.8 144.4 159.5	150 168	Ξ	1.0 2.3 2.1	2 3 	=======================================
AVERAGE		20.5	23	23	145.9	165	167	2.3	3	3
RANGE		18.2 TO 23.6	21 TO 26	21 TO 24	108.8 TO 186.8	147 TO 194	149 TO 191	0.5 TO 9.2	1 TO 6	2 TO 5
LEAST SIGNIFICAN	VT .	.7		Z-43	15.0					

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991
+SECOND AND THIRD YEAR DATA ALSO CONTAIN MONROE COUNTY DATA

## TABLE 5 SOUTH CENTRAL MICHIGAN ZONE 2 KENT COUNTY TRIAL ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

***************************************		% -MOISTURE			BUSHEL	S PER		% STAL	K LO	GING
HYBRID (BRAND-VARIETY		1991	YR	YR YR	1991	YR YR	YR.	1991	YR YR	YR
STINE	900	16.4			164.2			3.3		
NORTHRUP KING	N3624	16.5	17		185.0	172		1.4	1	
PICKSEED DAIRYLAND	83-280 DX-1100	16.5	18	==	160.6 213.7	188	- T	1.0	2	=
FUNK'S	G-BRAND 4260	17:1		-	193.7	100		2.8		==
PIONEER	X0215	17.1			228.7			1.9		
PICKSEED	83-282	17.1			167.0			1.9		
GREAT LAKES FUNK'S	GL446 Exp. 2078X	17.2	18	==	194.5	183		3.7	4	
PROVICO	PRO630X	17.3			183.3	=		1.4		
RENK	RK602	17.3			202.3		10 Ut /	2.8		
SUPER CROST	1900	17.4			219.3			2.8		
NORTHRUP KING KING AGRO	N3808 K416	17.4		ZI.	193.5		=	3.3	=	==
GOLDEN HARVEST	H-2331	17.6	18	19	199.6	198	182	6.0	4	3
NORTHRUP KING	N4242	17.7			188.6			2.8		2
FUNK'S PIONEER	G-BRAND 4299 3751	17.8	19	20	213.9 204.8	188	183	4.2		2
SUPER CROST	2000	17.9	19		182.2	198	163	3.2	3 4	
GREAT LAKES	GL459	17.9	19		196.6	190		2.8	3	
CARGILL	3427	17.9			202.1			1.9		
GOLDEN HARVEST DEKALB	H-2349 DK485	17.9	19	-	204.8	214	-	2.3	1	
WOLVERINE	W158	18.2	20		178.2	174		2.8	3	
COUNTRYMARK	C432X	18.2			210.2			9.3		
STINE	1015	18.2			186.4			0.9		
CALLAHAN JACQUES	27128X 4770	18.3	=		192.4		==	0.5	==	=
WOLVERINE	W156	18.4	19	20	199.4	185	176	2.3	4	4
PIONEER	X9310	18.4			206.6			0.0		
DAIRYLAND	STEALTH-1198	18.4	==	==	216.2		=	4.6		0 <u></u>
DAIRYLAND CROW'S	STEALTH-1201 179	18.4			201.8 165.3			4.4	=	
GUTWEIN	2100	18.5			226.4			3.9		
SUPER CROST	1999	18.6			154.8	-	12.00	3.7	==	
STINE	1021	18.6	=	==	187.3	=	==	2.3	==	==
CROW'S KING AGRO	K451	18.6			219.1 183.0			2.8	==	
PAYCO	687	18.7			189.8			3.7		
GREAT LAKES	GL499	18.8		-	214.4			2.0	-	
GOLDEN HARVEST	H-2390 DK524	18.8			226.6			0.0	7-	==
DEKALB GREAT LAKES	DK524 GL450	18.9	19		206.0 227.0	203		2.8	2	
NORTHRUP KING	N4545	18.9	20	21	209.4	192	175	2.9	2	1
KING AGRO	K402	18.9			210.5			2.6	-	45
TOP FARM CROW'S	TFsx1101 227	18.9	19	=	197.8	182	==	2.3	2	$\equiv$
JACQUES	5170	19.0			208.3			1.9		
PIONEER	3733	19.1	20		191.7	187	-	1.6	2	
PRO-SEED	XS1002	19.1			180.7			2.1		
TERRA	TR1010	19.1	20	20	189.7	172	166	1.4	2	1 2
BLANEY	B405 XR1505	19.3	20	21	190.5	178	168	1.0	2	
DAIRYLAND	DX-1103	19.4	20	21	188.1	180	163	3.8	3	2

		% MOIS			BUSHEL			% STAL	K LO	DGING
HYBRID (BRAND-VARIETY		1991	YR	yr	1991	2 YR	YR	1991	YR	yr.
UAPX PICKSEED	15013 8833	18.6 18.7	==	======	208.9			2.8	==	-
DAIRYLAND FUNK'S	STEALTH-1203	19.9	21	21	210.4	704	193	2.8		2
AMCORN	G-BRAND 4385 PSX7450	20.0	<u></u>		209.6 216.3	194		1.5 2.9	3	
FUNK'S FUNK'S	Exp.3112X G-BRAND 4393	20.2	21	22	203.4 206.2	184	180	3.7	2	3
DAIRYLAND	STEALTH-1206	20.5			163.4			4.9		
*PIONEER	B603 3527	20.7	21	=	207.6 225.9	214		2.3	2	
AMCORN	PSX8181	20.9	21		179.6	182	-	6.6	4	
CALLAHAN SUPER CROST	24448X 2989	20.9	==		204.8			1.6		
CALLAHAN	27199X 5327	21.0	21		205.0	208	=	2.5	4	==
GUTWEIN	2390	21.2		3	186.5			2.4		
CARGILL	4327	21.2		23	198.3	178	181	4.8	2	7
TERRA- KING AGRO	TR1040 K5574	21.2	22	22	173.4	198	182	2.4	1	1
RENK	RK702	21.3	22	22	211.3	191	170	2.3	2	1
DYNA-GRO *CARGILL	5351 SX269	21.4	21 23		173.4 238.2	161 223	-70-	2.8	3 2	7
TOP FARM	TFsx1107	21.5	21		192.3	203		2.3	1	
CALLAHAN PROVICO	C748 PRO811	21.5	22	=	204.9	183	==	1.4	i	
GOLDEN HARVEST AMCORN	H-2465 PSX9009	21.7	22		197.0 197.9	193		6.9	5	
DAIRYLAND	DX-1107	21.8			213.5	==		3.2		
ANDERSONS PAYCO	PSX360 872	21.8	22	23	203.0	185	171	7.9	4	4.
RUPP	XR1639	22.0			202.8			5.1		
NORTHRUP KING *PIONEER	N5729 3394	22.1	=	Z	174.0 245.5	==	==	3.7	=	==
COUNTRYMARK GREAT LAKES	C565X GL577	22.1	23	==	213.4 219.0	200		3.4	2	==
PIONEER	3475	22.2	21	22	195.9	182	174	1.4	1	1
KING AGRO	GG1008A	22.2	25		223.1	206	==	3.8	3	$\pm$
TOP FARM BLANEY	TFsx1104A B608	22.2			197.5			2.3		
BLANEY	B609	22.3			199.4			1.4		
GREAT LAKES	GL579 XR1739	22.3	23	==	183.3 201.3	190		4.1	4	==
*DAIRYLAND	DX-1110	22.5	24	25	229.3	215	196	2.5	2	2
GOLDEN HARVEST GOLDEN HARVEST	EX545 H-2485	22.5			207.6 187.4			1.9		
*TERRA	TR1090	22.7	24		226.5	219		2.3	 1	
*WOLVERINE DYNA-GRO	W167 5410	22.9	23		229.6	201	==	0.5	1	
GREAT LAKES GRIES	GL569 GSF-635	23.0	==	==.	191.5 215.0	==	3 == 1	3.2	==	
DYNA-GRO	5470	23.2			220.6			1.4		
TERRA GREAT LAKES	TR1060 GL583	23.2	24	24	205.7	197	190	1.9	2	2
*STINE	1116	23.3	24 23		238.2	213		2.9	3	

		% MOIS			BUSHEL			% STAL		
HYBRID (BRAND-VARIET)	<b>(</b> )	1991	YR	yr	1991	YR	YR	1991	YR	YR
PAYCO	648	19.5			195.1			1.9		
GREAT LAKES	GL482	19.6	21	22	197.8	175	177	1.9	2	1
GREAT LAKES	GL468	19.6			191.4			2.4		
RENK	RK646	19.7			204.4			3.2		
CROW'S	210	19.7			185.6			3.7		
GUTWEIN	2191	19.9	21		181.9	166		3.3	4	
PIONEER	3573	20.0	20	21	213.8	211	198	7.9	4	3
BLANEY	B505	20.1	20	21	189.2	191	173	2.4	2	2
PROVICO	PRO760X	20.1			204.8			1.9		
NORTHRUP KING	N4428	20.2	20		203.1	178		0.5	2	
*COUNTRYMARK	C502X	20.2			217.1			1.9		
ANDERSONS	PSX345	20.2			199.2			1.9		
GREAT LAKES	GL496	20.3			199.3			5.1		
STINE	1077	20.7			207.5			1.9		
*DEKALB	DK535	20.8	21	22	220.1	212	202	2.3	2	2
GRIES	GSF-4103	20.9			170.1			3.1		
GREAT LAKES	GL536	20.9			189.0			1.9		
PROVICO	PRO790	20.9			184.6			4.3		
ASGROW	RX626	21.0	21	22	181.3	189	175	0.5	1	1
AMCORN	PSX5757	21.1		== 1	208.3			0.9		
PAYCO	711	21.3			214.1			3.2		
ASGROW	RX578	21.5	21	22 -	209.2	198	192	1.4	1	2 :
*PRO-SEED	XS1043	21.9			223.0			1.0	-	
AVERAGE		18.8	20	21	197.7	187	179	2.6	2	===== 2
			====			=====			====	
nauan		16.4	17	19	154.8	166	163	0.0	1	1
RANGE		TO 21.9	TO 21	TO 22	TO 228.7	TO 214	TO 202	TO 9.3	TO 4	TO 4
TRACE CTONTERS			====:			=====		=======	====	=====
LEAST SIGNIFICA DIFFERENCE	ANT	.6			17.4					
COEFFICIENT OF	VARIANCE	99								

LATE TRIAL (105	DAY RELATIVE	MATURIT	Y OR	LATER	(BASED O	N COM	PANY RA	ATING)		
HYBRID (BRAND-VARIET	'Y')	% MOIS 1991	TURE 2 YR	3 YR	BUSHEL 1991	S PER 2 YR	ACRE 3 YR	% STAL 1991	K LO	DGING 3 YR
AMCORN CALLAHAN CALLAHAN CARGILL PIONEER	PSX9292 27188X C759 6227 3357	23.3 23.3 23.3 23.4 23.5	24 24 25	   25	206.3 216.0 204.1 200.0 199.5	187 189 193	   182	2.3 1.4 1.4 2.8 2.5		  2 
*ASGROW *ANDERSONS GRIES DAIRYLAND CALLAHAN	RX706 PSX370 GSF-6110 STEALTH-1112 C764	23.6 23.6 23.7 23.7 23.8	24 24  24	25 25 	233.8 226.9 224.0 223.6 205.9	223 211  197	210 205  	2.8 2.9 0.5 0.0 2.3	1  2	1  
PROVICO *UAPX CROW'S PROVICO CROW'S	PRO920 15014 498 PRO900 449	24.3 24.5 24.5 24.7 24.7	  24	=======================================	177.3 227.4 188.8 198.1 165.8	188		2.2 1.4 4.2 3.8 1.4	  1	
RUPP COUNTRYMARK RENK	XR1774 C682X RK721	25.4 25.7 25.8	25	 25	210.0 215.4 203.9	203	189	1.0 1.9 1.0	 2	 
AVERAGE		22.3	23	23	205.4	197	187	2.7	2	2
RANGE		18.6 TO 25.8	21 TO 25	21 TO 25	163.4 TO 245.5	161 TO 223	170 TO 210	0.0 TO 7.9	TO 5	1 TO 4
LEAST SIGNIFIC DIFFERENCE COEFFICIENT OF		1.0	:==== } :====		19.4		=====			======
*STCNTFTCANTI.V	DETTTED THAN AU	FDACE V	TELD	TN 10	01					

	1991	1990	1989
PLANTED	May 10	May 7	May 9
HARVESTED	October 11	November 15	October 24
SOIL TYPE	Spinks Loamy Sand	Belleville Loam	Belleville Loam
PREVIOUS CROP	Alfalfa Sod	Wheat/Soybeans	Corn
POPULATION	27,700	21,400	18,100
ROW WIDTH	30"	30"	30"
FERTILIZER	123-0-0	152-0-120	100-0-0+5 tons manure
SOIL TEST: PH	6.4	6.3	6.4
P	62 (high)	79 (high)	141 (very high)
K	256 (high)	400 (very high)	613 (very 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 ZONE 2 INGHAM COUNTY TRIAL - GRAIN ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

		% MOIS			BUSHEL	S PER		% STAL	K LO	
HYBRID (BRAND-VARIETY		1991	YR	YR	1991	YR	YR	1991	YR	YR
NORTHRUP KING	N4242	14.9			116.3			0.5	====	
PICKSEED	83-280	15.3			83.3			3.6		
NORTHRUP KING	N3624	15.4	16		105.7	139		2.1	2	
JACQUES	4770	15.9			154.9		7-	1.9		
NORTHRUP KING	N3808	16.0			135.7			0.0		
GOLDEN HARVEST	H-2331	16.0	17	19	131.3	161	162	3.8	4	3
STINE	900	16.1			121.5			1.0		
FUNK'S SUPER CROST	Exp.2078X	16.2			144.5			1.5		
GREAT LAKES	GL450	16.3			99.7			0.0		
ODOMIO	120	36.4			126.0					
CROW'S DEKALB	179 DK485	16.4	18	20	126.8	146	145	1.5		3
WOLVERINE	W156	16.6	18		127.3	147	143	1.5	3	
KING AGRO	K402	16.6			157.0			3.7		
DAIRYLAND	STEALTH-1201	16.6		,	161.1			1.8		
JACQUES	5170	16.7			127.5			4.5		
GUTWEIN	2100	16.7			159.9			3.6		
GOLDEN HARVEST	H-2390	16.7			156.0			2.9		
DEKALB SUPER CROST	DK524 2000	16.8	19 19	22	152.0	171	172	2.6	3	3
COUNTRYMARK	C432X STEALTH-1198	16.8			145.7			3.0		
DAIRYLAND TOP FARM	TFsx1101	16.8 16.8	18		125.7 120.8	137		3.7	5	
GOLDEN HARVEST	H-2349	16.8			141.6			2.0		
FUNK'S	G-BRAND 4299	16.9			147.0			1.0		
STINE	1015	17.0			128.4			1.5		
STINE	1021	17.2			95.4			2.7		
TERRA	TR1020	17.3	19		124.5	142		1.9	4	
CROW'S	227	17.3			141.4			1.0		
*GREAT LAKES	GL459	17.4	20		156.8	158		1.9	7	
DAIRYLAND	DX-1100	17.4	18		96.8	126		7.5	. 5	
PAYCO	687	17.4			116.3			1.5		
PICKSEED *GREAT LAKES	83-282 GL499	17.4			77.2 176.3			2.8		
NORTHRUP KING	N4545	17.5	20	22	147.5	160	158	2.5	3	2
KING AGRO	K451	17.5			113.0			1.5		-4
RENK CARGILL	RK602 3427	17.5			124.6 87.9			5.1		
BLANEY	B405	17.7	19		106.8	123		1.0	3	
PAYCO	648	17.8			143.1			3.0		
PIONEER	XO215	17.9			112.4			1.0		
TERRA	TR1010	17.9	19		144.5	149		2.1	7	
CROW'S	237	17.9			163.0			0.5		
*BLANEY	B505	18.0	20		158.4	161		1.0	2	
SUPER CROST	1900	18.0			96.0			4.1		
*PROVICO	PRO760X	18.0			156.4			2.7		
*RUPP	XR1505	18.0			153.9			0.0		
PIONEER	X9310	18.1		==	97.8			11.8		
FUNK'S GREAT LAKES	G-BRAND 4260 GL482	18.2	20	21	105.3 139.2	158	150	3.0	4	5
WOLVERINE	W158	18.2	19		120.0	136		1.5	3	
PROVICO PRO-SEED	PRO630X XS1002	18.2 18.3			92.1 125.8			1.2		
CALLAHAN	27128X	18.3			97.4			1.0		
COUNTRYMARK	C502X	18.4			186.1			2.2		

		% MOIS			BUSHEL		ACRE	% STALK LO	
HYBRID (BRAND-VARIETY		1991	YR	YR	1991	YR	YR	1991 YR	YR
*AMCORN DAIRYLAND DAIRYLAND UAPX BLANEY	PSX7450 STEALTH-1206 STEALTH-1203 15013 B603	17.3 17.7 17.8 18.1 18.2			193.9 129.9 143.0 174.8 172.0	=======================================		3.3 2.2 2.1 0.5 1.6	=======================================
CALLAHAN FUNK'S NORTHRUP KING CALLAHAN GUTWEIN	24448X G-BRAND 4393 N5729 27199X 2390	18.3 18.7 18.7 18.9 19.0	22	23	145.7 167.4 146.3 167.3 134.5	172	167	2.4 0.5 1 0.5 2.3 2.6	
KING AGRO TOP FARM *GOLDEN HARVEST *GRIES PIONEER	K5574 TFsx1104A H-2485 GSF-6110 3527	19.1 19.2 19.2 19.3 19.3	23   22	24	179.1 140.9 205.2 234.5 164.3	177  186	171  	1.6 5 0.5 1.6 1.5 2.2 1	4 =====================================
*STINE CARGILL COUNTRYMARK TERRA AMCORN	1116 5327 C565X TR1040 PSX9009	19.3 19.3 19.4 19.5	24 22 24 23	25 	207.8 182.2 140.3 125.3 163.4	194 189 156 152	165	0.0 2 3.0 3 2.7 3 1.1 3 1.9	4
FUNK'S GREAT LAKES PROVICO WOLVERINE FUNK'S	G-BRAND 4385 GL569 PRO811 W167 Exp.3112X	19.6 19.6 19.6 19.7 19.9	22 22 24	24	166.0 155.9 135.1 182.0 183.8	168  149 184	167 	0.5 1 1.6 0.0 1 0.0 3 2.8	1 == ==
CARGILL PAYCO GOLDEN HARVEST AMCORN DYNA-GRO	SX269 872 EX545 PSX8181 5351	19.9 19.9 19.9 19.9 20.0	24  22 23	26  	178.8 161.7 188.1 172.0 154.6	177  182 157	178	0.5 1 0.0 1.9 2.7 2 0.0 1	2 
CALLAHAN GOLDEN HARVEST *CALLAHAN GREAT LAKES *ASGROW	C748 H-2465 27188X GL579 RX706	20.0 20.2 20.2 20.3 20.3	23 23 23 23 25	25 24  25 27	167.1 161.5 200.5 154.5 211.0	170 174  171 202	164 169  166 179	2.0 2 0.5 3 2.0 2.9 4 2.0 4	2 2  3 3
RUPP *RUPP ANDERSONS SUPER CROST DAIRYLAND	XR1639 XR1739 PSX360 2989 DX-1107	20.3 20.4 20.4 20.5 20.5	24	25 	149.2 204.5 142.9 136.0 158.7	162	166	2.3 1.1 1.1 3 3.0 0.5	3
*BLANEY *PROVICO CROW'S *BLANEY *TERRA	B609 PRO900 449 B608 TR1090	20.6 20.6 20.6 20.7 20.7	24	27 	194.3 197.7 184.4 220.1 211.4	171	160 	2.4 1.9 1.0 1 1.0 2.2	 
PIONEER TOP FARM *AMCORN *DAIRYLAND *CALLAHAN	3394 TFsx1107 PSX9292 DX-1110 C764	20.8 20.8 20.8 21.1 21.1	25 25 25 25	  27 27	179.6 177.9 234.7 226.4 208.9	210 208 193	194 175	1.1 2.4 1.0 2 0.5 1 0.5 2	  1 2
*DYNA-GRO *DAIRYLAND GRIES DYNA-GRO PROVICO	5470 STEALTH-1112 GSF-635 5410 PRO880	21.2 21.2 21.3 21.3 21.3	  25 26	==	211.0 194.9 170.9 169.0 175.0	166 170	=	1.6 2.0 2.9 3.2 3 1.8 2	=

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ı	7	ı		

文·12· 包括图形。17·52年		& MOIS	TURE		BUSHEL			% STAL		
HYBRID (BRAND-VARIET	Y)	1991	YR	YR	1991	YR	YR	1991	YR	YR
*GRIES NORTHRUP KING KING AGRO *PAYCO DAIRYLAND	GSF-4103 N4428 K416 711 DX-1103	18.5 18.5 18.5 18.5 18.6	20	   22	167.0 141.9 82.8 185.8 131.0	150  152	   151	3.9 2.0 4.3 1.5 2.1	 2  4	=======================================
*DEKALB *PIONEER *PROVICO GREAT LAKES GREAT LAKES	DK535 3573 PR0790 GL468 GL446	18.8 18.8 18.9 19.0 19.1	21 21   19	22 22  	170.3 178.1 170.3 110.7 104.4	183 184  131	182 179 	1.0 2.1 2.3 3.4 5.8	1 2  5	3  
RENK *ANDERSONS GUTWEIN *ASGROW *AMCORN	RK646 PSX345 2191 RX578 PSX5757	19.1 19.1 19.2 19.2 19.2	20 21	23	133.1 159.6 143.9 155.1 170.3	156 162	161	2.5 2.2 2.5 1.0	 3 2	
*GREAT LAKES GREAT LAKES PIONEER ASGROW *STINE	GL496 GL536 3751 RX626 1077	19.3 19.4 19.8 19.9 20.0	19 23	21 25 	156.9 148.6 101.3 148.4 163.3	132 155	122 153	2.1 1.5 2.3 2.4 2.3	3 2	 7 2
*PRO-SEED PIONEER CROW'S	XS1043 3733 210	20.1 20.5 22.4	21	Ξ	212.1 129.8 117.2	153	=	3.6 0.0 0.5	<u>1</u>	Ξ
AVERAGE		17.8	19	22	134.8	151	158	2.3	3 .	3
RANGE		14.9 TO 22.4	16 TO 23	19 TO 25	77.2 TO 212.1	123 TO 184	122 TO 182	0.0 TO 11.8	TO 7	2 TO 7
LEAST SIGNIFIC DIFFERENCE COEFFICIENT OF		.9			16.1					

		% MOIS	TURE		BUSHEL			& STAL	K LO	
HYBRID (BRAND-VARIETY)		1991	YR	YR.	1991	YR	YR	1991	YR	YR
*ANDERSONS *RENK *CALLAHAN GREAT LAKES RENK	PSX370 RK721 C759 GL577 RK702	21.3 21.4 21.6 21.7 21.7	26 25 25 	27  26	223.8 205.4 195.9 186.4 161.8	211 198 183  151	182  153	1.0 2.0 0.5 1.6	3 4 1  1	-4  1
GREAT LAKES KING AGRO PIONEER TERRA PIONEER	GL583 GG1008A 3475 TR1060 3357	21.8 21.8 21.9 21.9 22.0	26 22 26	24	198.5 209.5 117.1 170.4 184.0	200 151 172	152 	2.7 1.6 2.8 2.0 2.1	1 2 2	3
PROVICO CARGILL CROW'S CARGILL PICKSEED	PRO920 4327 498 6227 8833	22.0 22.0 22.3 22.5 22.9	26	28	161.5 104.6 175.7 210.8 111.4	203	193	1.1 1.0 4.5 0.5 6.3		
COUNTRYMARK RUPP UAPX	C682X XR1774 15014	23.2 23.7 23.9	=	=	224.8 216.5 207.4	=	Ξ	1.1 0.5 0.5	==	Ξ
AVERAGE		20.4	24	25	176.8	178	171	1.6	2	2
RANGE		17.3 TO 23.9	22 TO 26	23 TO 28	104.6 TO 234.7	149 TO 211	152 TO 194	0.0 TO 6.3	1 TO 5	TO 4
LEAST SIGNIFIC DIFFERENCE COEFFICIENT OF	The Section of the Se	.9			15.2					

	1991
PLANTED	May 5
HARVESTED	October 7
SOIL TYPE	Capac Loam
PREVIOUS CROP	Soybeans
POPULATION	25,400
ROW WIDTH	30"
FERTILIZER	165-50-50
SOIL TEST: PH	6.8
P	54 (medium)
K	133 (low)

1990 May 8 October 29-30 Capac Loam Corn 22,800 30" 165-50-50 6.1 93 (high) 200 (medium) 1989 April 27 October 10 Capac Loam Corn 20,900 36" 165-50-50 6.1 156 (very high) 228 (high)

FARM COOPERATOR: Michigan State University, East Lansing COUNTY EXTENSION DIRECTOR: Marvin Preston, Mason EXTENSION AGRICULTURAL AGENTS: John Hayden and Laura Rhodes, Mason

# TABLE 7 SOUTH CENTRAL MICHIGAN ZONE 2 SAGINAW COUNTY TRIAL ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

HYBRID		% MOIS	TURE	3	BUSHEL	S PER	ACRE	% STAL	K LOI	
(BRAND-VARIETY		1991	YR	YR	1991	YR	YR	1991	YR	YR
NORTHRUP KING STINE *NORTHRUP KING NORTHRUP KING SUPER CROST	N3624 900 N3808 N4242 1900	15.7 16.1 16.7 16.8 17.3	17  	=======================================	157.2 148.1 175.0 170.3 160.1	167		1.5 3.5 1.5 1.4 0.5	2   	
GREAT LAKES *PIONEER PROVICO CARGILL RENK	GL446 3751 PRO630X 3427 RK602	17.3 17.4 17.5 17.5 17.6	19 18  	19 18 	152.7 178.1 152.9 143.1 165.7	151 168 	158 164 	1.0 1.0 1.8 0.6 1.5	9 4	. 7 .3 
WOLVERINE DAIRYLAND FUNK'S PICKSEED PIONEER	W156 DX-1100 G-BRAND 4260 83-280 XO215	17.7 17.8 17.9 17.9	19 18 	19	153.8 138.4 166.6 152.3 166.8	157	158   	1.6 2.6 1.1 0.0 1.0	7	_3 
PICKSEED JACQUES CROW'S SUPER CROST KING AGRO	83-282 4770 179 2000 K416	18.0 18.1 18.1 18.2 18.4	20		150.7 158.7 134.6 159.8 163.8	160		2.1 1.1 1.0 1.5 1.0	5	=======================================
GOLDEN HARVEST DEKALB FUNK'S *FUNK'S JACQUES	H-2349 DK485 Exp.2078X G-BRAND 4299 5170	18.6 18.7 18.8 18.8 18.8	19		139.7 157.2 168.7 176.8 169.9	160		0.5 2.6 1.1 1.0 0.5	4	
COUNTRYMARK GOLDEN HARVEST WOLVERINE *PIONEER NORTHRUP KING	C432X H-2331 W158 3733 N4428	18.8 18.8 18.9 18.9	19 20 20 21	18	171.6 164.8 163.3 190.3 155.6	174 148 178 154	163	1.0 4.4 1.6 0.0 1.1	8 5 2 2	
KING AGRO CROW'S GREAT LAKES NORTHRUP KING DAIRYLAND	K402 237 GL496 N4545 STEALTH-1198	19.2 19.2 19.3 19.3 19.3	21		161.0 163.8 155.6 161.0 155.6	  156	153	1.7 3.2 0.0 1.0		  2 
*GREAT LAKES STINE DAIRYLAND SUPER CROST GREAT LAKES	GL499 1015 STEALTH-1201 1999 GL450	19.4 19.5 19.5 19.6 19.7	=	<u> </u>	184.2 157.1 152.9 154.9 148.7			0.5 0.5 1.6 0.5 1.0		=======================================
*PIONEER PIONEER TERRA STINE CALLAHAN	3573 X9310 TR1020 1021 27128X	19.7 19.7 19.7 19.8 19.8	21 20 	20   	184.1 163.0 164.4 160.3 160.0	184  159 	179   	0.5 2.1 0.5 2.6 0.0	3 -2 	4
GREAT LAKES GUTWEIN GUTWEIN GOLDEN HARVEST PRO-SEED	GL459 2100 2191 H-2390 XS1002	19.9 19.9 20.0 20.1 20.2	21 21 		144.5 165.4 162.2 150.0 164.9	153 161 	==. ==.	0.5 1.1 1.0 1.0	-3 -4 	
TERRA *PAYCO PAYCO DEKALB	TR1010 648 687 DK524	20.2 20.2 20.2 20.3	21   21	21  20	161.1 176.0 158.5 132.0	165  159	159  163	0.5 0.5 1.6 2.0	2	2  4

LATE TRIAL (105 DAY	RELATIVE MATURIT	Y OR I	LATER (	BASED OF	N COMPA	NY RATI	NG)		
HADAD	% MOIS	TURE		BUSHEL	S PER A		% STAL	K LOD	
HYBRID (BRAND-VARIETY)	1991	YR YR	YR	1991	YR YR	YR	1991	YR	YR
PICKSEED 883 UAPX 150 *CARGILL 432 DAIRYLAND STE CARGILL 532	3 19.7 13 20.6 7 20.9 ALTH-1203 20.9			165.9 176.5 183.3 157.0 148.2	   156		0.6 1.7 2.2 1.2 2.3	   2	
	7 21.7	22 22  22 	21 22 	166.8 158.7 166.1 187.3 156.5	157 160  192	157 160  	0.6 0.5 0.5 0.0 0.6	0 1	1 2  
RENK RK7 TOP FARM TFS NORTHRUP KING N57 PIONEER 347 DYNA-GRO 535	x1104A 22.2 29 22.5 5 22.5	23  22 22	== == ==	119.2 168.8 171.2 164.7 151.9	129  172 147		1.2 1.2 2.9 1.1 3.5	3  2 3	
	811 22.9	23  23 23	   23	154.5 153.2 183.8 165.5 165.5	163  156 167	   161	1.2 1.8 0.6 0.0 1.8	2  1 5	
CALLAHAN C74 GREAT LAKES GL5 ANDERSONS PSX SUPER CROST 298 GUTWEIN 239	79 23.2 360 23.2 9 23.3	23 23 24 	23 23  	137.1 161.0 177.6 144.8 155.9	147 175 177 	151 165  	0.5 2.4 1.3 2.0 0.0	2 3 3 	2 2   
KING AGRO K55 TOP FARM TFs *CARGILL SX2 COUNTRYMARK C56 RUPP XR1	x1107 23.4 69 23.7 5X 23.8	24  25 24 	23	168.0 163.8 182.5 154.6 154.9	179  189 168	171  	2.4 0.6 2.3 0.6 2.4	3  2 3 	3  
AMCORN PSX FUNK'S Exp PIONEER 335 GOLDEN HARVEST H-2 PAYCO 872	7450 23.8 .3112x 23.9 7 23.9 465 23.9 24.0	24	  24	159.9 167.3 166.8 168.6 176.2	  178		1.1 1.1 0.0 1.6 1.1	  3 	
BLANEY B60 WOLVERINE W16 *DYNA-GRO 541 DAIRYLAND DX- TERRA TR1	7 24.2 0 24.2 1107 24.4	24 24  25	24  24 24	158.3 164.4 182.8 156.2 161.5	169 175  167	161  164	2.9 1.7 0.0 1.8 2.9	3 2 2	 3  2
CALLAHAN 244 BLANEY B60 GOLDEN HARVEST EX5 GREAT LARES GL5 *KING AGRO GG1	9 24.5 45 24.6	  25		154.2 153.6 158.7 153.8 181.3	   182	=======================================	1.8 1.7 1.7 0.6 0.0	   2	=======================================
*CALLAHAN 271	9009 24.7	25  25  25	26  	178.4 162.1 156.9 180.5 179.1	160  176	159 	1.1 0.5 2.9 2.8 0.0	 0   1	1  
RENK RK7 CROW'S 498 GOLDEN HARVEST H-2 DYNA-GRO 547 DAIRYLAND STE	25.4 485 25.4	26  	25    	159.5 156.1 149.2 178.6 167.3	164   	162   	0.6 1.1 2.2 1.7 4.3	_0  	1 = = =

EARLY TRIAL (104 DAY RELATIVE MATURITY OR EARLIER (BASED ON COMPANY RATING)

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

		% MOIS		3	BUSHEL			% STAL		
HYBRID (BRAND-VARIE	ry)	1991	YR	YR	1991	YR	3 YR	1991	YR	YR
RENK GREAT LAKES *COUNTRYMARK DAIRYLAND TOP FARM	RK646 GL482 C502X DX-1103 TFsx1101	20.3 20.4 20.4 20.4 20.4	21 21 21 20	21 21 	148.3 171.2 179.3 152.7 153.6	163 150 160	161 151	1.0 0.0 0.0 1.8 0.5	4 -6 4	3 5
BLANEY BLANEY *RUPP PAYCO KING AGRO	B405 B505 XR1505 711 K451	20.5 20.5 20.6 20.6 20.7	20 21 	20 21 	141.7 158.5 178.8 156.3 160.9	148 153  	153 155  	0.0 1.0 1.6 1.0 0.5	2 4 	3 3 
CROW'S CROW'S DEKALB GREAT LAKES STINE	227 210 DK535 GL468 1077	21.0 21.1 21.5 21.6 21.7	22	21 	161.7 157.1 169.6 151.6 170.2	176	169	0.0 0.5 1.0 0.6 2.1	3	3 
*GRIES ASGROW PROVICO AMCORN ASGROW	GSF-4103 RX578 PRO760X PSX5757 RX626	21.8 21.9 21.9 22.1 22.9	22  23	22  23	174.1 156.3 162.2 157.4 150.2	156  168	151  162	0.0 0.5 0.0 1.1 1.6	1   2	1  - 3
ANDERSONS PROVICO *PRO-SEED	PSX345 PRO790 XS1043	23.0 23.4 24.0	Ξ	Ξ	170.8 153.6 178.3	=	Ξ	2.1 0.0 0.5	=	
AVERAGE :		19.6	20	20	160.7	160	160	1.1	4	3
RANGE		15.7 TO 24.0	17 TO 23	18 TO 23	132.0 TO 190.3	144 TO 184	151 TO 179	0.0 TO 4.4	1 TO 9	TO 7
LEAST SIGNIFI DIFFERENCE COEFFICIENT O		.7			12.7					

LATE TRIAL (105 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING)

HUDDID		% MOIS	TURE	3	BUSHEL	S PER	ACRE	% STAI	K LO	
HYBRID (BRAND-VARIE	TY)	1991	YR	YR	1991	YR	YR	1991	YR	YR
DAIRYLAND GREAT LAKES STINE PROVICO PROVICO	DX-1110 GL583 1116 PRO920 PRO900	25.6 25.7 25.7 25.7 25.7 25.7	26 26 	26   	178.7 168.9 166.4 169.1 163.4	174 173	164	0.6 3.5 1.2 1.7 1.9	2  2 	2  
*BLANEY CARGILL CALLAHAN TERRA UAPX	B608 6227 C759 TR1090 15014	25.8 25.8 25.8 26.0 26.1	26 26 	26 	190.8 170.5 164.9 176.6 172.0	174 162 	145	1.2 0.0 2.4 0.0 1.7	3 2	2
ANDERSONS ASGROW GRIES PROVICO COUNTRYMARK	PSX370 RX706 GSF-6110 PRO880 C682X	26.1 26.2 26.3 26.4 26.5	27 26  26	=	165.1 165.4 175.1 171.6 176.9	173 171 175	=	2.3 1.3 0.5 0.0 1.2	2 1  1	
CALLAHAN ' RUPP GRIES	C764 XR1774 GSF-635	27.0 27.1 27.3	26 	26 	172.2 169.0 149.1	169	154	1.3 1.2 2.5	3	3
AVERAGE		24.1	24	24	165.2	168	160	1.4	2	2
RANGE		19.7 TO 27.3	22 TO 27	21 TO 26	119.2 TO 190.8	129 TO 192	145 TO 171	0.0 TO 4.3	0 TO 5	TO 3
LEAST SIGNIFIC DIFFERENCE COEFFICIENT O		.9			13.7					

1991 PLANTED May 14 HARVESTED October 17 SOIL TYPE Charity Clay PREVIOUS CROP Dry Beans POPULATION 24,000 30" ROW WIDTH FERTILIZER 150-0-0 SOIL TEST: PH 7.2 77 (high) 336 (very high) 1990 May 12 November 9,12 Charity Clay Dry Beans 23,200 30" 21-7-14 7.6 128 (very high) 415 (very high) 1989 May 3 October 30 Brookston Clay Loam Sugar Beets 19,100 28" 235-60-50 7.1 75 (high) 271 (high)

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

FARM COOPERATORS: Paul Horny, Saginaw Beet & Bean Research Farm, Saginaw (1991, 1990)
Stuart Reinbold, Reese (1989)
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-1991, 1990, 1989

	A STATE OF STATE OF	% MOIS	TURE		BUSHEL	S PER	ACRE	% STAL		
HYBRID (BRAND-VARIETY)	1	1991	YR	YR	1991	YR YR	YR ·	1991	YR	YR
NORTHRUP KING	N3624	15.9	17		149.3	159		1.7	2	
STINE	900	16.2		-	144.6		==	2.6		1
NORTHRUP KING PICKSEED	N4242 83-280	16.5		7	158.4			1.6	==	
NORTHRUP KING	N3808	16.7		-	168.1			1.6		
FUNK'S	Exp.2078X	17.4			175.0			1.3		
DAIRYLAND JACQUES	DX-1100 4770	17.4	18	=	149.6	153	17	1.9	5	==
RENK	RK602	17.5	ZE :		169.2			1.9		
GOLDEN HARVEST	H-2331	17.5	18	19	165.2	178	169	4.7	5	4
PICKSEED	83-282	17.5			131.6			2.3		
SUPER CROST SUPER CROST	1900	17.6	19	=	158.5	169		2.5	4	==
WOLVERINE	W156	17.6	19	19	160.2	163	162	1.8	4	3
CROW'S	179	17.6			142.2			2.4		
FUNK'S PIONEER	G-BRAND 4260	17.7	=	=	155.2	==	==	.0.9		=
PROVICO	XO215 PRO630X	17.7			169.3			1.3		
CARGILL	3427	17.7			144.4			2.5		
DEKALB	DK485	17.8	19	20	171.0	173	163	1.9	2	3
FUNK'S GOLDEN HARVEST	G-BRAND 4299 H-2349	17.8			179.2	=	<u></u>	2.1	=	
GREAT LAKES	GL446	17.8	18	18	150.5	155	161	1.6	6	5
COUNTRYMARK	C432X	17.9			175.8			4.4		
KING AGRO	K416	18.1			144.8			2.8		
SUPER CROST	1999 5170	18.2	Ξ	=	136.5		==	1.4	==	==
JACQUES KING AGRO	K402	18.2			168.6			2.7		
STINE	1015	18.2			157.3	7-		1.0	9-1	
DAIRYLAND	STEALTH-1198	18.2			165.8	5		3.1		
DAIRYLAND GREAT LAKES	STEALTH-1201 GL450	18.2		-	171.9		=	2.6	==	
PIONEER	3751	18.3	19	20	161.4	162	156	1.9	3	4
GREAT LAKES	GL459	18.4	20		166.0	167		1.7	4	
WOLVERINE	W158	18.4	19		153.8	153		2.0	4	
GUTWEIN STINE	2100	18.4	=	=	183.9	=	=	2.9	-	==
GOLDEN HARVEST	H-2390	18.5			177.5			1.3		
GREAT LAKES	GL499	18.6	20		191.6		770	1.7	2	2
NORTHRUP KING	N4545	18.6	20	21	172.6	169	162	2.1		
CROW'S DEKALB	237 DK524	18.6	20	21	182.0	178	176	2.2	3	3
PIONEER	X9310	18.7	20		163.3			4.6		
TOP FARM	TFsx1101	18.7	19		157.4	160		1.8	4	
TERRA	TR1020	18.8	20		155.1	156		1.4	3	
PAYCO CALLAHAN	687 27128X	18.8	==	77	154.9		=	2.3	Ξ	7
KING AGRO	K451	19.0			152.3	10		1.4		
TERRA	TR1010	19.1	20	20	165.1	162	158	1.3	4	3
CROW!S	227	19.1			166.6			1.1	-7	
BLANEY PRO-SEED	B405 XS1002	19.2	20	20	146.3	149	151	1.3	2	13
PAYCO PAYCO	648	19.2			157.1			1.8		
NORTHRUP KING	N4428	19.3	20		166.9	161	TO PROPERTY OF STREET	1.2	2	

THE PARTY PARTY IN COMME		% MOIS	SANDENT NEEDS 19		BUSHEL	CONTRACTOR AND A STATE OF THE S	ACRE	% STAL	NAME OF STREET	DGIN
HYBRID (BRAND-VARIETY		1991	YR	3 YR	1991	2 YR	yr	1991	YR	YR
UAPX DAIRYLAND FUNK'S FUNK'S DAIRYLAND	15013 STEALTH-1203 G-BRAND 4393 G-BRAND 4385 STEALTH-1206	19.1 19.5 20.1 20.3 20.3	 22 22 	 22 22 	186.7 170.1 177.4 180.8 148.8	172 173	169 172	1.7 2.0 1.1 0.9 3.0	 1 1	2
PICKSEED AMCORN CALLAHAN CARGILL PIONEER	8833 PSX7450 27199X 5327 3527	20.4 20.4 20.4 20.5 20.6	  22 22	=======================================	157.8 190.0 179.5 180.0 192.5	184 197	=	2.8 2.4 1.8 3.9 1.8	  3 1	
BLANEY NORTHRUP KING AMCORN GUTWEIN TOP FARM	B603 N5729 PSX8181 2390 TFsx1104A	21.0 21.1 21.1 21.2 21.2		= :	179.3 163.8 168.7 159.0 169.1	175		2.3 2.4 3.5 1.7 1.2	 3 	-
TERRA CALLAHAN FUNK'S DYNA-GRO KING AGRO	TR1040 24448X Exp.3112X 5351 K5574	21.2 21.2 21.3 21.3 21.3	23  22 23	23   23	154.7 168.2 184.8 160.0 179.3	166 	167   175	1.8 2.8 2.5 2.1 1.8	3 2 3	2
PROVICO CARGILL CALLAHAN SUPER CROST CARGILL	PRO811 4327 C748 2989 SX269	21.4 21.4 21.5 21.6 21.7	23 23 24	24 26	165.2 162.1 169.7 154.7 199.8	163 173 196	168	0.3 2.7 1.3 2.2 1.9	1  2  2	2 2
RENK COUNTRYMARK ANDERSONS GREAT LAKES PIONEER	RK702 C565X PSX360 GL579 3394	21.7 21.8 21.8 21.9 21.9	23 23 23 23	24 25 24 24	164.1 169.4 174.5 166.3 203.0	157 175 175 178	153 177 170 169	1.3 2.2 3.4 3.1 1.0	2 3 4 4	3333
TOP FARM PAYCO GOLDEN HARVEST GREAT LAKES RUPP	TFsx1107 872 H-2465 GL577 XR1639	21.9 21.9 21.9 22.0 22.0	23	24	178.0 184.1 175.7 187.3 169.0	182 	173 	1.8 2.1 3.0 0.9 3.3	4	3
AMCORN PIONEER DAIRYLAND WOLVERINE GOLDEN HARVEST	PSX9009 3475 DX-1107 W167 EX545	22.0 22.2 22.2 22.3 22.3	22 24 	23 24	172.7 159.2 176.1 192.0 184.8	168 191	164  175	2.9 1.8 1.8 1.2 1.8	2  3	3
GREAT LAKES GOLDEN HARVEST BLANEY RUPP DYNA-GRO	GL569 H-2485 B609 XR1739 5410	22.4 22.4 22.5 22.5 22.8	  24	= :	167.1 180.6 182.4 194.7 187.9	181	= -	1.8 2.3 1.8 1.6	   2	=
*STINE *CALLAHAN *BLANEY *KING AGRO *GRIES	1116 27188X B608 GG1008A GSF-6110	22.8 22.8 22.9 22.9 23.1	24  25 	=======================================	204.1 199.0 205.4 204.6 211.2	193  196	=======================================	1.4 2.1 1.5 1.8 0.8	2  2 	
PIONEER *TERRA *DAIRYLAND *AMCORN	3357 TR1090 DX-1110 PSX9292	23.1 23.1 23.1 23.1	25 25	26	183.4 204.8 211.5 206.7	199	185	1.5 1.5 1.1	 1 2 2	<u>-</u>

		% MOIS		3	BUSHEL			% STAL	K LO	DGING
HYBRID (BRAND-VARIE	TY)	1991	YR	YR	1991	YR	YR	1991	YR	YR
GREAT LAKES	GL482	19.4	21	21	169.4	165	163	1.6	3	3
BLANEY	B505	19.5	20	21	168.7	168	162	1.5	. 3	2
*PIONEER	3573	19.5	20	21	192.0	193	185	3.5	3	3
PIONEER	3733	19.5	20		170.6	173		0.5	2	
DAIRYLAND	DX-1103	19.5	20	21	157.3	161	155	2.6	4	4
GREAT LAKES	GL496	19.6			170.6			2.4		
GUTWEIN	2191	19.7	21		162.7	161		2.3	4	
*COUNTRYMARK	C502X	19.7			194.2			1.4		
RENK	RK646	19.7			161.9			2.2		
*PROVICO	PRO760X	20.0			174.5			1.5		
GREAT LAKES	GL468	20.1			151.2			2.1		
*PAYCO	711	20.1			185.4			1.9		
GREAT LAKES	GL536	20.2			170.4			1.3		
*DEKALB	DK535	20.4	21	22	186.7	190	184	1.4	2	2
GRIES	GSF-4103	20.4			170.4			2.3		
*STINE	1077	20.8			180.3			2.1		
*ANDERSONS	PSX345	20.8			176.5			2.1		
*AMCORN	PSX5757	20.8			178.7			1.1		
*ASGROW	RX578	20.9	21	22	173.5	172	168	1.0	1	2
PROVICO	PRO790	21.1			169.5			2.2		
CROW'S	210	21.1			153.3			1.6		
ASGROW	RX626	21.3	22	23	160.0	171	163	1.5	2	2
*PRO-SEED	XS1043	22.0			204.5	-		1.7		
AVERAGE		18.7	20	21	164.4	166	165	2.0	3	3
		15.9	17		131.6		151	0.5		2
RANGE		TO	TO	18 TO	TO	149 TO	TO	TO		-
RANGE		22.0	22	23	204.5	193	185		10	. TO
		22.0	- 22	23	204.5	193	100	4.7	.====	
LEAST SIGNIFIC	CANT	. 4			8.7			2		
						=====				====

		* MOIS	TURE		BUSHEL	S PER	ACRE	% STAL	K LO	
HYBRID (BRAND-VARIET	Y)	1991	YR	YR	1991	YR	YR	1991	YR	Y
*DYNA-GRO CROW'S *ASGROW *DAIRYLAND *GREAT LAKES	5470 449 RX706 STEALTH-1112 GL583	23.3 23.3 23.4 23.5 23.6	24 25	26 26 	203.4 170.8 203.4 195.3 197.3	173 198	165 186	1.6 1.0 2.0 2.1 2.7	1 2 	
CALLAHAN PROVICO PROVICO *ANDERSONS GRIES	C759 PRO880 PRO900 PSX370 GSF-635	23.6 23.7 23.7 23.7 23.9	25 25 26	26  26	188.3 181.5 186.4 205.3 178.3	178 182  198	156  197	1.4 2.1 2.5 2.1 2.9	1 2  2	- 1 - 1
*CARGILL PROVICO *CALLAHAN CROW'S RENK	6227 PRO920 C764 498 RK721	23.9 24.0 24.0 24.1 24.2	25 25 25	27 26 26	193.8 169.3 195.7 173.5 189.6	190 186  188	182  168  178	1.1 1.7 1.4 3.3 1.2	-2 -2 -2	2
*UAPX *COUNTRYMARK *RUPP	15014 C682X XR1774	24.8 25.1 25.4	==	==	202.3 205.7 198.5	=	=	1.2 1.4 0.9	==	=
AVERAGE		22.3	24	24	182.5	181	173	1.9	2	
RANGE		19.1 TO 25.4	22 TO 26	22 TO 27	148.8 TO 211.5	155 TO 199	153 TO 197	0.3 TO 3.9	TO 4	T
LEAST SIGNIFIC	CANT	.5	=		9.2					-==:

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

## TABLE 9 NORTH CENTRAL MICHIGAN ZONE 3 HURON COUNTY TRIAL - GRAIN ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

		& MOIS	TURE		BUSHEL	S PER	ACRE	& STAL	K LOI	DGING
(BRAND-VARIETY)		1991	YR	YR YR	1991	YR	YR	1991	YR .	YR
DEKALB	DK401	16.7			193.0			1.0		
*FUNK'S	G-BRAND 4120	16.9			206.7		-	1.9		
STINE	860	17.4	19		143.0	77.		1.9		
AMCORN *TERRA	PSX3333 TR940	17.4	20	==	192.2 202.8	167	==	0.9	3 9	==
CROW'S	167	17.6	19		151.7	148		0.5	8	
*CALLAHAN	C725	17.6	19		201.1	179		0.9	13	
CARGILL	2437 TFsx1195A	17.7	19	I	142.8			3.8		
TOP FARM PROVICO	PRO540X	17.7		==	198.6 154.6	173		0.5	14	==
RENK	RK505	17.8	19	20	183.7	162	157	0.9	4	3
*PICKSEED	83-282	17.8	==		205.5		77	1.4	77	
ASGROW KING AGRO	RX406 K2204	17.9	19 19	20	189.1	171	172	0.9	12	8
CARGILL	2927	18.0			193.1			3.3	_ <u>-</u> -	
RENK	RK430	18.1	19		163.8	154		1.9	5	
JACQUES	4120	18.2	20	20	168.1	772	776	0.5		3
NORTHRUP KING PICKSEED	N3624 5545	18.2	19	20	182.6	173 173	176 175	0.5	5	2
FUNK'S	G-BRAND 4140	18.3			180.2		245	1.9		
UAPX	15011	18.3			133.8			15.1		
COUNTRYMARK	C323X	18.4			151.9	701	(	3.3		
JUNG *UAPX	2496 15012	18.4	20	N. P. Carlotte	195.7	181		3.2	4	==
ASGROW	RX409	18.5	19		166.8	160		0.5	1	
WOLVERINE	W133	18.6	19		156.2	139		3.4	11	
STINE	900	18.6			158.5			0.0		
TOP FARM FUNK'S	TFsx1097A G-BRAND 4160	18.6	19		180.1	158		0.5	6	
SUPER CROST	1900	18.7	20		184.6	169	-	2.1	11	
GREAT LAKES	GL446	18.7	20	20	187.5	173	172	1.4	7	5
RENK PROVICO	PRO630X	18.7	19	22	166.4	158	156	0.9	8	5
KING AGRO	K416	18.8	20	21	194.6	184	179	1.9	3	2
NORTHRUP KING	N3808	18.9			192.0			1.4		
*PIONEER	XO215	18.9			199.6	100		0.0		-
*CARGILL *GOLDEN HARVEST	3427 H-2331	18.9	20	21	205.1	188	187	1.4	7 6	5
PICKSEED	5665	18.9	20	20	203.9	164	174	0.0	ŏ	ĭ
RENK	RK602	19.1			162.0			1.4		
GREAT LAKES	GL459	19.2	21		188.8	172		1.9	. 3	
RUPP GREAT LAKES	Exp.1-191 GL438	19.2	==	==	178.1	==	==.	0.5	==	
*PIONEER	3751	19.3	20	20	209.0	184	182	2.1	3	2
*DAIRYLAND	STEALTH-1198	19.3		-	199.3	-		0.9		7
CALLAHAN CROCE	C729	19.3	20		164.4	154		1.0	5	
SUPER CROST WOLVERINE	2000 W156	19.4	20	22	175.9	171	164	0.5	5	3
DAIRYLAND	DX-1100	19.4	21		187.1	172		0.9	3	
CALLAHAN	C743	19.4	21	15	197.2	180		1.4	4	
SUPER CROST	1999 CT 482	19.5		22	196.2	177	171	1.0		2
GREAT LAKES *NORTHRUP KING	GL482 N4242	19.7	21	22	184.6 204.4	177	171	0.9	3	
AMCORN	PSX5555	19.7	22	23	199.5	178	180	0.9	2	1

		% MOIS	TURE		BUSHEL	S PER	ACRE	% STAL	K LO	DGIN
HYBRID (BRAND-VARIETY		1991	YR	YR	1991	YR	YR	1991	YR	YR
PICKSEED	83-280	19.2			162.8			0.0		
FUNK'S	G-BRAND 4299	19.4	21	22	195.1	185	185	2.0	2	.2
JUNG PAYCO	2696 648	19.5			199.1			1.9		
STINE	1015	20.1			171.1			2.9		-
FUNK'S	Exp.2078X	20.2			205.8			1.9		
TERRA	Exp.190	20.2			187.1			2.8		
TERRA BLANEY	TR1010 B505	20.5	23	23	201.1	181	177 169	1.0	1 5	1 4
UAPX	15013	20.7			193.8			0.5		
PIONEER	3527	20.8	22		212.9	207		0.5	0	
BLANEY	B405	20.9			176.8		and the second	2.3		
PIONEER CROW'S	3573 414	21.0	21 23	22	232.4	214 161	211	1.0	6	4
GREAT LAKES	GL499	21.3	23	-	177.7	101		1.9		
CROW'S	227	21.3	22		165.5	162		0.5	3	
TERRA	TR1020	21.4	22	-	191.0	173	<del>-</del>	0.0	11	-
RENK PIONEER	RK646 3475	21.4	23	24	194.4 205.8	169 189	180	3.7	3	
KING AGRO	K402	21.7	45		164.8			1.6		-
KING AGRO	K451	21.8			172.0			1.0		
CARGILL	4327	21.8	22	. 23	186.7	184	177	0.9	3	2
PROVICO GREAT LAKES	PRO760X GL536	21.9	=	A Last	172.6			1.0		Mis.
COUNTRYMARK	C502X	22.0		<u> </u>	190.0			1.0		
PROVICO	PRO751	22.1	23		192.8	182		0.5	4	
AMCORN	PSX5757	22.2			187.6		-1	3.2		-
STINE CARGILL	1077 37012	22.3		15	197.3		7-2-5	2.3		
KING AGRO	K5574	22.4	24	25	199.5	190	182	6.3	6	
CARGILL	5157	22.4	24	25	178.1	170	169	2.4	3	
RENK	RK702	22.6		0	197.6		153	1.4		
GREAT LAKES	GL579 RX578	22.7	25 23	26	189.5 188.2	194	189 173	2.0	2 3	
CALLAHAN	24448X	23.0			197.7			1.0		
BLANEY	B603	23.1			190.0			0.0		
PROVICO	PRO811	23.1	24	1	172.2	166		1.5	8	
AMCORN SUPER CROST	PSX7450 2989	23.1	ZZ		193.2 172.1			1.0		
GOLDEN HARVEST	H-2465	23.3	24		191.1	180	10 To 10	1.4	5	
CALLAHAN	27199X	23.3			172.4			0.5		
CROW'S	380	23.4	25		159.6	159		3.2	8	
DYNA-GRO GOLDEN HARVEST	5351 H-2485	23.5	24		136.4	145	==	1.5	3	-
GOLDEN HARVEST	EX545	23.7		==	191.3	4		1.9		
CALLAHAN	C748	23.7			168.4			0.5		
PROVICO	PRO790	23.8		77	177.8	-	7	2.0		
ASGROW COUNTRYMARK	RX626 C565X	23.9	25	25	185.0 175.3	176	175	0.9	3	/ _2
RUPP	XR1639	23.9		-	159.8			0.5		
BLANEY	B607wx	24.2	25		165.1	159		0.5	7	
GREAT LAKES	GL577	24.3			167.5	75.		0.5		
RENK GREAT LAKES	RK721 GL569	24.3	26	27	193.3	176	170	2.8	2	2
WOLVERINE	W167	25.2	Land Bridge	STATE OF THE STATE	178.2	THE REAL PROPERTY.	T. L. Service	0.9		

		% MOIS	TURE		BUSHEL	S PER	ACRE	% STAL	K LO	DGING
HYBRID (BRAND-VARIETY	)	1991	YR	YR	1991	YR	YR	1991	YR	YR
FUNK'S	G-BRAND 4260	20.0	21		187.5	172		0.0	1	
COUNTRYMARK	C432X	20.0			193.3			3.8		
*CALLAHAN	27128X	20.0			200.2		·	0.5		
*JACQUES	4770	20.1	22		215.1	197		0.5	2	
*GOLDEN HARVEST	H-2349	20.1			201.9			1.4		
ANDERSONS	PSX250	20.2			184.3			0.5		
PIONEER	3733	20.3	21		182.2	180		1.9	3	
GREAT LAKES	GL450	20.4			196.3			2.3		
*GREAT LAKES	GL496	20.6			203.2			2.8		
CROW'S	179	20.6			161.8			0.9		
DAIRYLAND	STEALTH-1201	20.8			166.1			0.0		
JUNG	2514	20.8			172.0			1.0		
PAYCO	687	21.0			187.3			0.9		
GREAT LAKES	GL468	21.2	-		167.8			0.0		
PIONEER	X9310	21.2			165.6			0.5		
ASGROW	RX469	21.2	21		187.7	171		1.9	5	
GOLDEN HARVEST	H-2390	21.4			177.0			0.9		
TOP FARM	TFsx1101	21.6	22		186.3	178		3.2	11	
STINE	1021	21.8			192.1			0.5		
ANDERSONS	PSX290	21.8	22	23	189.0	177	176	1.0	2	2
AMCORN	PSX4343	21.8			146.1			2.1		
RUPP	XR1505	21.9			157.4			0.0		
KING AGRO	GG955	22.1	23	23	194.6	179	181	0.5	2	1
AVERAGE		19.2	20	21	182.8	172	174	1.4	5	3
		16.7	19	20	133.8	139	156	0.0	0	1
RANGE		TO	TO	TO	TO	TO	TO	TO	TO	TO
	the second	22.1	23	23	215.1	197	187	15.1	14	8
LEAST SIGNIFICA	NT	1.3	-===		16.1					_====
COEFFICIENT OF	VARIANCE	98	· .							

LATE TRIAL (101 DAY RELATIVE MATURITY OR LATER (BASED ON COMPANY RATING) % MOISTURE BUSHELS PER ACRE % STALK LODGING (BRAND-VARIETY) 1991 YR YR 1991 YR YR 1991 25.3 --25.5 --27.4 --189.9 --182.5 --177.8 --CALLAHAN 27188X PROVICO PRO880 0.0 0.0 --COUNTRYMARK C682X ----------\_\_\_\_\_\_ -----------------------------AVERAGE 22.4 23 24 183.9 176 180 1.5 4 2 ------------------\_\_\_\_\_\_\_ ---------------19.2 21 22 TO TO TO 136.4 145 169 0.0 0 RANGE TO TO TO 27.4 26 27 TO TO TO 232.4 214 211 6.3 11 LEAST SIGNIFICANT . 9 19.7 DIFFERENCE COEFFICIENT OF VARIANCE 118

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\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

PLANTED May 15 October 16 HARVESTED Kilmanagh Loam SOIL TYPE PREVIOUS CROP Corn POPULATION 27,400 ROW WIDTH 30" FERTILIZER 160-141-6 SOIL TEST: pH 6.9

1991

98 (high)

384 (very high)

1990 May 14 November 16 Kilmanagh Loam Corn 24,500 30" 163-57-98 7.6 140 (very high) 187 (medium)

1989 May 10 October 29 Kilmanagh Loam Corn 19,900 30" 193-49-97 7.8 104 (very high) 172 (medium)

FARM COOPERATOR: William McCrea, Bad Axe
COUNTY EXTENSION DIRECTOR: Robert Johnson, Bad Axe
EXTENSION AGRICULTURAL AGENT: James Lecureux, Bad Axe

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## TABLE 10 NORTH CENTRAL MICHIGAN ZONE 3 MONTCALM COUNTY - IRRIGATED TRIAL ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

		& MOIS	TURE		BUSHEL	S PER	ACRE	% STAL		
HYBRID (BRAND-VARIETY		1991	YR YR	YR	1991	YR	YR	1991	YR	YR
STINE	860	16.6			191.3		-	2.3		
DEKALB UAPX	DK401 15011	16.7		=	213.7			0.5		==
CARGILL	2927	17.1	==	I	214.8	TENS.		5.1		
JACQUES	4120	17.2			200.5			5.1		
NORTHRUP KING	N3624	17.3	22 20	20	220.3	184	191	0.9	1	2
CROW'S	167	17.3	20		159.9	150	TORREST OF THE STATE OF	6.5	4 3	
WOLVERINE KING AGRO	W133 K2204	17.4	21		194.2	161		2.8	3	
STINE	900	17.4	-		195.9			4.2		
COUNTRYMARK	C323X	17.5			185.8			4.4		
FUNK'S	G-BRAND 4120	17.6		==	223.9			0.9		==
PROVICO PICKSEED	PRO540X 5545	17.7	22		200.1	172		1.9	2	
NORTHRUP KING	N3808	17.8	-		210.9			3.7		
RENK	RK534	17.8	22		195.1	168		0.9	6	
PICKSEED	83-282 GL459	17.8	22		223.8	191	==	0.9	3	=='
GREAT LAKES	15012	18.0	22		206.8	191		0.0		
RENK	RK505	18.0	22		183.8	151		3.3	4	
PICKSEED	5665	18.0	21		211.5	180		3.4	6	
GREAT LAKES	GL446	18.1	24	19	210.4	186	175	1.4	3	3
CALLAHAN NORTHRUP KING	C725 N4242	18.1	21	19	197.2	175		3.2	5	
ASGROW	RX409	18.2	23		214.3	186		3.8	2	
ASGROW	RX406	18.2	23	21	191.9	168	178	4.2	4	3
PROVICO	PRO630X	18.2	22		202.8	160	distributes	3.5	3	
RENK'S	RK430 G-BRAND 4140	18.2			187.8	100		3.7		
KING AGRO	K416	18.3	23	20	203.7	176	174	2.8	3 .	3
TERRA	TR940	18.3	23		199.7	174		2.3	6	
*GOLDEN HARVEST	H-2331 C729	18.3	23	21	229.0	205	187	2.9	1	4
CALLAHAN DEKALB	DK485	18.3	24		194.3 237.6	208	,	2.8	4	
FUNK'S	G-BRAND 4160		21		205.2	181		0.0	2	
SUPER CROST	1900	18.4	24		208.5	194		2.8	5 2	
JACQUES	4770	18.4	24		227.8	202		1.4	2	13 700
*PIONEER CARGILL	XO215 3427	18.6	24		216.1	197		1.4	4	
RENK	RK602	18.6			187.9			4.6		
PIONEER	3751	18.7	22	20	226.3	188	177	1.9	5	5
COUNTRYMARK	C432X	18.7			215.8			0.0		-
CARGILL TOP FARM	2437 TFsx1195A	18.7	23		179.1 202.1	181		3.7	7	
AMCORN	PSX3333	18.7	22	20	216.7	181	182	3.7	7 5	4
DAIRYLAND	DX-1100	18.8	24		225.7	193		0.9	3	
RUPP	Exp.1-191	18.8			193.8		-	2.3		
SUPER CROST	2000 STEALTH-1198	18.9			216.1 243.0	7		0.9		
DAIRYLAND	STEALTH-1201	19.0			248.0			2.3		
JUNG	2496	19.0	24	22	199.6	169	175	2.8	3	4
GOLDEN HARVEST	H-2349	19.0			215.8			1.4	-	/
ANDERSONS GREAT LAKES	PSX250 GL438	19.1			199.6 208.0			2.3	=	
PIONEER	X9310	19.2			258.3			0.5	CHEST STATE	And the same

PICKSEED   83-280   18.2     220.1     2.4       2.5     2.5     2.6		& MOIS			BUSHEL			% STAI		
PICKEEED 83-280 18.2 220.1 2.4 FUNK'S CHRAND 4299 18.3 24 - 215.7 18.5 - 2.3 3 1.14 2.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1				YR					YR	
KING AGRO CROW'S	83-280	18.2			220.1	55	THE RESERVE OF THE PERSON NAMED IN			
GROW'S CAPP 19.0 26 225.6 179 0.5 1 23 225.4 CAPP 19.3 225.4 2.3 23 225.4 CAPP 19.3 225.4 2.3 23 23 25		18.3		77	215.7			2.3	3	
CRRGILL 37012 19.4 220.2 19.5 19.6 19.5 19.6		19.0			225.6			0.5	7	
COUNTRYMARK C502X 19.5 191.6 1.9 -		19.3			225.4		- <del>-</del>	2.3		
STINE 1015		19.4			220.2			1.9		
GREAT LAKES  GLANEY  B405  19.7  196.3  9.3  BLANEY  B505  19.7 25 23 198.5 175 171 3.2 4 4  TERRA  TRI020  19.7 26  200.1 182  2.8 4  JUNG  2696  19.8  TERRA  TRI010  19.9 25  193.1 173  3.4 3  PAYOO  KING AGRO  K451  20.0  EUINI'S  EASP.2078X  20.2  TERRA  EASP.2078X  20.3 26 23 242.8 201 192 3.7 3 3  *PIONEER  3573  20.3 26 23 242.8 201 192 3.7 3 3  *PIONEER  3573  20.3 26  211.3  21.4  2.8 4  TERRA  TRI010  19.9 25  193.1 173  3.4 3  PAYOO  K451  CROW'S  414  20.3 26  219.3  21.1  2.5  2.6  2.7  2.8 4  2.8 4  2.8 4  2.8 4  2.8 4  2.8 4  DYNG  AGRO  AK51  20.1  187.6  2.5  2.5  2.6  2.7  2.8 4  2.8 4  2.8 4  2.8 4  2.8 4  2.9  2.9  2.1  2.5  2.5  2.5  2.6  2.7  2.8 4  2.8 4  2.9  2.9  2.9  2.9  2.9  2.9	C502X	19.5			191.6			1.9		
BLANEY B505 19.7 196.3 9.3 BLANEY B505 19.7 25 23 198.5 175 171 3.2 4 4 TERRA TRID20 19.7 26 200.1 182 2.8 4 200.2 182 2.8 4 200.2 182 2.8 4 200.2 182 2.8 4 200.2 182 2.8 4 200.2 182 2.8 4 200.2 182 2.8 4 200.2 182 2.8 4 200.2 182 2.8 4 200.2 182 2.8 4 200.2 182 2.8 4 3 200.2 19.3 6.6 6 2.5 10.3 19.8 219.3 6.6 6 2.5 10.3 19.8 219.3 1.173 3.4 3 200.2 19.8 1.173 3.4 3 200.2 19.8 1.173 3.4 3 200.2 19.8 1.1 173 3.4 3 200.2 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 173 3.4 3 20.5 19.8 1.1 19.2 3.7 3 3 3 20.5 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8		19.5		\$ 500 E	210.7			1.9		
TERRA TR1020 19.7 26 200.1 182 2.8 4 UAPX 15013 19.8 210.3 4.6 6 TERRA TR1010 19.9 25 193.1 173 3.4 3 193.1 173 3.4 3 3 193.1 173 3.4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		19.7						9.3		-
TERRA TR1020 19.7 26 200.1 182 2.8 4 UAPX 15013 19.8 210.3 4.6 6 TERRA TR1010 19.9 25 193.1 173 3.4 3 193.1 173 3.4 3 3 193.1 173 3.4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		19.7	25	23	198.5	175	171	3.2		4
JUNG 2696 19.8 219.3 6.6 197.1 173 3.4 3 197.2 197.2 197.2 197.3 3.4 3 3 197.2 19		19.7			200.1					
PAYCO 648 20.0 221.1 0.5 70.5 70.5 21.6 2.5 70		19.8			210.3					
KING AGRO K451			25		193.1	173		3.4	3	
KING AGRO K451 20.1 187.6 2.5 FUNK'S Exp. 2078X 20.2 194.5 1.4 187.6 2.8	648	20.0			221.1			0.5		
TERRA	K451	20.1			187.6					
*PIONEER 3573 20.3 26 23 242.8 201 192 3.7 3 3  *PIONEER 3527 20.3 27 249.4 213 1.0 1 CROW'S 414 20.3 26 221.3 184 5.1 3 1.0 1 2.0 1.0 1 2.0 1.0 1 1.4 3 1.0 1 2.0 1.0	Exp. 2078X							1.4		-
RENK RK646 20.4 25 193.6 170 1.4 3 ASGROW RX578 20.6 26 24 203.7 177 172 1.9 1 2 ROPICO PRO751 20.6 27 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 3.1 2 2 215.0 179 -	3573						192	3.7	3	3
RENK RK646 20.4 25 193.6 170 1.4 3 ASGROW RX578 20.6 26 24 203.7 177 172 1.9 1 2 ROYLCO PRO751 20.6 27 215.0 179 3.1 2 ROYLCO PRO760X 20.9 233.8 0.5 ROYLCO PRO760X 20.9 233.8 0.5 1.9 ROYLCO PRO760X 20.9 210.9 1.9 1.9 ROYLCO ROYLCO PRO760X 20.9 210.9 1.9 1.9 ROYLCO ROYLCO PRO7557 21.1 27 24 223.7 192 189 4.9 5 4 3 AMCORN PSX5757 21.1 27 24 213.4 190 186 2.8 4 3 AMCORN PSX5757 21.1 27 24 213.4 190 186 2.8 4 3 AMCORN PSX5757 21.1 226.8 0.9 20.		20.3	27		249.4	213		1.0	1	
CALLAHAN 27199X 20.6 201.2 4.3 AMCORN PSX7450 20.7 213.1 0.5 24LANEY B603 20.9 233.8 0.5 PROVICO PRO760X 20.9 210.9 1.9 210.9 1.9 210.9 1.9 210.9 1.9 210.9 -		20.3	26		221.3	184		5.1	3	
CALLAHAN 27199X 20.6 201.2 4.3 AMCORN PSX7450 20.7 213.1 0.5 BLANEY B603 20.9 233.8 0.5 PROVICO PRO760X 20.9 210.9 1.9 210.9 1.9 210.9 1.9 210.9 1.9 210.9		20.4	25		193.6	170 -	172	1.4		
AMCORN PSX7450 20.7 213.1 0.5 PROVICO PRO760X 20.9 210.9 1.9 1.9 7.8 ING AGRO K5574 21.0 27 24 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 4 223.7 192 189 4.9 5 5 6 24 223.9 193 1.5 5 1.		20.6	27		215.0	179		3.1	2	
AMCORN PSX7450 20.7 213.1 0.5 PROVICO PRO760X 20.9 210.9 1.9 1.9 XING AGRO K5574 21.0 27 24 223.7 192 189 4.9 5 4 223.7 192 189 186 2.8 4 3 3 3 4 3 3 4 3 3 4 3 3 4 3 3 4 3 3 4 3 4 3 3 4 3	27199X	20.6			201.2			4.3		
PROVICO   PRO760X   20.9	PSX7450	20.7			213.1			0.5		
CARGILL		20.9			233.8			0.5		
CARGILL 5157 21.1 27 24 213.4 190 186 2.8 4 3 AMCORN PSX5757 21.1 221.1 2.8 CALLAHAN 24446X 21.2 226.8 0.9 COUNTRYMARK C565X 21.3 215.5 4.9  DYNA-GRO 5351 21.4 26 195.1 168 1.4 2 PROVICO PRO790 21.4 209.1 1.5  STINE 1077 21.4 216.4 2.3 CROW'S 380 21.4 26 210.9 179 4.2 7 SUPER CROST 2989 21.5 205.7 5.0  WOLVERINE W167 21.5 205.7 5.0  WOLVERINE W167 21.5 224.7 0.9 *PIONNER 3475 21.5 26 24 234.3 196 178 1.0 1 2 GOLDEN HARVEST H-2465 21.5 26 223.9 193 3.7 4 RUPP XR1639 21.6 205.2 4.2 CALLAHAN C748 21.6 205.2 4.2  CALLAHAN C748 21.6 212.8 0.5  ASGROW RX626 21.7 28 26 198.9 177 172 3.7 2 2 PROVICO PRO811 21.8 28 212.6 178 1.9 3  GREAT LAKES GL579 22.0 27 217.3 197 3.2 5  GREAT LAKES GL569 22.1 205.9 6.0  GREAT LAKES GL569 22.1 205.9 6.0  GREAT LAKES GL569 22.1 205.9 6.0  GREAT LAKES GL577 22.2 224.0 3.2  GREAT LAKES GL569 22.1 205.9 6.0  GREAT LAKES GL579 22.2 224.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0					223.7		189	4.9	5	4
CARGILL 5157 21.1 27 24 213.4 190 186 2.8 4 3 AMCORN PSX5757 21.1 221.1 2.8 2.8 CALLAHAN 24448X 21.2 226.8 0.9 COUVTRYMARK C565X 21.3 215.5 4.9  DYNA-GRO 5351 21.4 26 195.1 168 1.4 2 PROVICO PRO790 21.4 209.1 1.5 STINE 1077 21.4 216.4 2.3 CROW'S 380 21.4 26 210.9 179 4.2 7 SUPER CROST 2989 21.5 205.7 5.0  WOLVERINE W167 21.5 224.7 0.9 *PIONNEER 3475 21.5 26 24 234.3 196 178 1.0 1 2 *PIONNEER 3475 21.5 26 24 234.3 196 178 1.0 1 2 *GOLDEN HARVEST H-2465 21.5 26 223.9 193 3.7 4 RUPP XR1639 21.6 205.2 4.2 CALLAHAN C748 21.6 212.8 198.9 177 172 3.7 2 2 *PROVICO PRO811 21.8 28 212.6 178 1.9 3  RSGROW RX626 21.7 28 26 198.9 177 172 3.7 2 2 *PROVICO PRO811 21.8 28 212.6 178 1.9 3 *GREAT LAKES GL579 22.0 27 217.3 197 3.2 5 *RENK RR702 22.0 191.0 3.2 *GREAT LAKES GL569 22.1 205.9 6.0  GREAT LAKES GL569 22.1 205.9 6.0  GREAT LAKES GL569 22.1 224.0 220.0 3.2 *GREAT LAKES GL579 22.2 224.0 2.0 3.2 *GREAT LAKES GL569 22.1 205.9 6.0 *GREAT LAKES GL569 22.1 210.9 3 191 3.2 *GREAT LAKES GL569 22.1 210.9 3 191 3.2 *GREAT LAKES GL579 22.2 224.0 220.0	4327	21.0	27	25	217.1	184	186	3.4	3	3
CALLAHAN 24448X 21.2 226.8 0.9 COUNTRYMARK C565X 21.3 215.5 4.9 215.5 4.9 215.5 4.9 215.5 4.9 215.5 4.9 215.5 4.9 215.5 4.9 215.5 215.	5157	21.1	27	24	213.4	190		2.8		MANAGEMENT OF STREET
COUNTRYMARK         C565X         21.3          215.5          4.9             DYNA-CRO         5351         21.4         26          195.1         168          1.4         2            PROVICO         PR0790         21.4           209.1          1.5           21.5           21.4           21.4           21.5           205.7           205.7           5.0            5.0            5.0             5.0		21.1			221.1			2.8		STREET, ST.
PROVICO PRO790 21.4							-	4.9		Later Delivery
PROVICO PRO790 21.4	5351	21.4	26		195.1	168		1.4	2	
WOLVERINE W167 21.5 224.7 0.9 PIONEER 3475 21.5 26 24 234.3 196 178 1.0 1 2 GOLDEN HARVEST H-2465 21.5 26 223.9 193 3.7 4 RUPP KR1639 21.6 205.2 4.2 RUPP KR1639 21.6 212.8 0.5 ASGROW RX626 21.7 28 26 198.9 177 172 3.7 2 2 PROVICO PROB11 21.8 28 212.6 178 1.9 3 GREAT LAKES GL579 22.0 27 217.3 197 3.2 5 RENK RR702 22.0 191.0 3.2 5 RENK GREAT LAKES GL569 22.1 205.9 6.0 GREAT LAKES GL569 22.1 205.9 6.0 GREAT LAKES GL569 22.1 224.0 22.0 GREAT LAKES GL569 22.1 224.0 2.0	PRO790	21.4			209.1			1.5		
WOLVERINE W167 21.5 224.7 0.9 PIONEER 3475 21.5 26 24 234.3 196 178 1.0 1 2 GOLDEN HARVEST H-2465 21.5 26 223.9 193 3.7 4 RUPP KR1639 21.6 205.2 4.2 RUPP KR1639 21.6 212.8 0.5 ASGROW RX626 21.7 28 26 198.9 177 172 3.7 2 2 PROVICO PROB11 21.8 28 212.6 178 1.9 3 GREAT LAKES GL579 22.0 27 217.3 197 3.2 5 RENK RR702 22.0 191.0 3.2 5 RENK GREAT LAKES GL569 22.1 205.9 6.0 GREAT LAKES GL569 22.1 205.9 6.0 GREAT LAKES GL569 22.1 224.0 22.0 GREAT LAKES GL569 22.1 224.0 2.0	1077	21.4			216.4		SETTING S	2.3		
WOLVERINE W167 21.5 224.7 0.9 2010NER 3475 21.5 26 24 234.3 196 178 1.0 1 2 GOLDEN HARVEST H-2465 21.5 26 223.9 193 3.7 4 RUPP XR1639 21.6 205.2 4.2 212.8 0.5 CALLAHAN C748 21.6 212.8 0.5 0.5 212.8 0.5 212.8 3.7 2 2 PROVICO PROBII 21.8 28 212.6 178 1.9 3 212.6 178 1.9 3 212.6 178 3.2 5 3.2 5		21.5	20				4	5.0	-2	
*PIONEER 3475 21.5 26 24 234.3 196 178 1.0 1 2 GOLDEN HARVEST H-2465 21.5 26 223.9 193 3.7 4 RUPP KR1639 21.6 205.2 4.2 RUPP KR1639 21.6 205.2 4.2 CALLAHAN C748 21.6 212.8 0.5  ASGROW RX626 21.7 28 26 198.9 177 172 3.7 2 2 PROVICO PRO811 21.8 28 212.6 178 1.9 3  GREAT LAKES GL579 22.0 27 217.3 197 3.2 5  RENK RK702 22.0 191.0 3.2  GREAT LAKES GL569 22.1 205.9 6.0  GREAT LAKES GL569 22.1 205.9 6.0  GREAT LAKES GL569 22.2 224.0 2.0  GREAT LAKES GL569 22.1 224.0 2.0  GREAT LAKES GL569 22.2 224.0 2.0	W167	21 5			224 7			0.0		
RUPP XR1639 21.6 205.2 4.2 CALLAHAN C748 21.6 212.8 0.5 3.2 S CALLAHAN C748 21.6 212.8 0.5 3.7 2 2 2 PROVICO PRO811 21.8 28 212.6 178 1.9 3 GREAT LAKES GL579 22.0 27 217.3 197 3.2 5 RENK RK702 22.0 191.0 3.2 S 3.2 S CREAT LAKES GL569 22.1 205.9 6.0 GREAT LAKES GL569 22.1 205.9 22.0 22.0 S		21.5	26		234.3	196	178	1.0	1	2
RUPP XR1639 21.6 205.2 4.2 CALLAHAN C748 21.6 212.8 0.5 3.2 S CALLAHAN C748 21.6 212.8 0.5 3.7 2 2 2 PROVICO PRO811 21.8 28 212.6 178 1.9 3 GREAT LAKES GL579 22.0 27 217.3 197 3.2 5 RENK RK702 22.0 191.0 3.2 S 3.2 S CREAT LAKES GL569 22.1 205.9 6.0 GREAT LAKES GL569 22.1 205.9 22.0 22.0 S	H-2465	21.5	26		223.9	193		3.7	4	
ASGROW RX626 21.7 28 26 198.9 177 172 3.7 2 2 PROVICO PROB11 21.8 28 212.6 178 1.9 3 GREAT LAKES GL579 22.0 27 217.3 197 3.2 5 RENK GREAT LAKES GL569 22.1 191.0 3.2 GREAT LAKES GL569 22.1 205.9 6.0 GREAT LAKES GL569 22.1 224.0 2.0 2.0 RENK GREAT LAKES GL569 22.1 224.0 22.0 2			1	-	205.2	=		0.5		==
PROVICO     PROB11     21.8     28      21.6     178      1.9     3        GREAT LAKES     GL579     22.0     27      217.3     197      3.2     5        GREAT LAKES     GL569     22.1       205.9       6.0         GREAT LAKES     GL577     22.2       224.0       22.0         SLANEY     22.2       22.0        2.0         SLANEY     22.2       22.0        2.0         SLANEY     22.2       22.0        2.0         SLANEY     22.2       22.0        2.0			20	25		177	172			
GREAT LAKES GL579 22.0 27 217.3 197 3.2 5 RENK RK702 22.0 191.0 3.2 GREAT LAKES GL569 22.1 205.9 6.0 GREAT LAKES GL577 22.2 224.0 2.0 PLANEY RENAME CL578 22.4 29 218.3 191 1.4 2 224.0 224.0 2.0 -		21.8	28		212.6			1.9	3	
RENK RK702 22.0 191.0 3.2 GREAT LAKES GL569 22.1 205.9 6.0 GREAT LAKES GL577 22.2 224.0 219.3 2.0 PLANEY GL577 22.2 224.0 219.3 21.0 2.0	GL579	22.0	27		217.3			3.2	5	
GREAT LAKES GL577 22.2 224.0 2.0 PLANEY B607th 22.4 29 219.3 191 1.4 2			=	=	191.0	==		3.2	E.	$\equiv$
DEANDY DECTAN 22 4 20 210 2 101 1 4 2									-	20000000000000000000000000000000000000
RENK RK721 22.4 30 27 232.8 188 180 2.3 2 2		22 A	28		218 3	181	N 80	1.4		
	RK721	22.4	30	27	232.8	188	180	2.3	2	2
GOLDEN HARVEST H-2485 22.5 232.1 0.5	H-2485	22.5			232.1		-	0.5		
		83-280 G-BRAND 4299 K402 227 GL499 37012 C502x 1015 GL536 B405 B505 TR1020 15013 2696 TR1010 648 K451 Exp.2078X Exp.190 3573 3527 414 RK646 RX578 PRO751 27199X PSX7450 B603 PRO760X K5574 4327 5157 PSX5757 24448X C565X 5351 PRO790 1077 38	1991	1991 YR	1991	1991   YR YR   1991	1991 YR YR 1991 YR   183-280   183-280   18.3 24	1991 YR YR   1983-280   18.2       220.1       227.6       227.7   19.0   26     225.6   179     227.7   19.0   26     225.6   179     227.7   19.0   26     225.6   179     27.0   27.1       27.	1991   YR   1991   YR   YR   YR   1991   YR   YR   YR   1991   YR   YR   YR   1991   YR   YR   YR   YR   YR   YR   YR   Y	1991   YR   YR   1991   YR

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HYBRID		% MOIS	TURE 2	3	BUSHEL	S PER	ACRE	% STAI	LK LOI	DGING 3
(BRAND-VARIETY)		1991	YR	YR	1991	YR	YR	1991	YŘ	YR
ASGROW	RX469	19.3	24		223.6	195		1.4	4	
JUNG	2514	19.3			199.3			2.3		
CROW'S	179	19.3			191.3			4.2		
AMCORN	PSX4343	19.3			181.7			3.3		
CALLAHAN	C743	19.3	25	23	214.0	183	177	6.5	- 6	4
FUNK'S	G-BRAND 4260	19.4	22		211.7	170		1.4	2	
GREAT LAKES	GL468	19.4			181.6			1.9		
AMCORN	PSX5555	19.5	25	23	204.9	183	181	1.4	4	5
SUPER CROST	1999	19.6			194.9			1.5		
*GREAT LAKES	GL450	19.6			232.5	,,		3.7		
*PIONEER	3733	19.6	24		242.2	209		2.8	2	
STINE	1021	19.6			207.2			1.9		
GREAT LAKES	GL482	19.7	23	22	203.8	176	173	1.9	4	3
WOLVERINE	W156	19.7	23	22	213.1	186	177	2.3	4	3
GREAT LAKES	GL496	19.9			214.3			2.8		
TOP FARM	TFsx1101	19.9	25		213.7	184		2.8	.3	
TOP FARM	TFsx1097A	20.0			188.2			1.9		,
*ANDERSONS	PSX290	20.0	25		229.9	199		0.9	2	
*GOLDEN HARVEST	H-2390	20.0			239.1			1.9		
RUPP	XR1505	20.1			213.0			1.9		
PAYCO	687	20.1			222.6			5.1		
CALLAHAN	27128X	20.5			193.3			3.4		
KING AGRO	GG955	20.7	26	23	205.1	173	172	1.9	2	3
AVERAGE		18.6	23	21	208.9	181	178	2.5	3	. 3
		16.6	20	19	159.9	150	168	0.0	1	1
RANGE		TO	TO	TO	TO	TO	TO	TO	TO	TO
		20.7	26	23	258.3	209	191	6.5	7	5
LEAST SIGNIFICAN		1.2	-====		17.0					
DIFFERENCE	VI.	1.2			17.0					
COEFFICIENT OF V	TARTANCE	0.0								
COEFFICIENT OF	ARIANCE	8.8								

	% MOIS	TURE		BUSHEL	S PER	ACRE	% STAL	K LO	DGIN
HYBRID (BRAND-VARIETY)	1991	YR	YR	1991	YR	YR	1991	YR	YF
GOLDEN HARVEST EX545 PROVICO PRO880 COUNTRYMARK C682X	23.1 23.4 23.4	=	===	221.1 213.4 223.4	=	Ξ	3.2 2.0 0.0	Ξ	=
AVERAGE	20.9	26	24	214.1	184	181	2.7	3	3
RANGE	18.2 TO 23.4	24 TO 30	23 TO 27	187.6 TO 249.4	168 TO 213	171 TO 192	0.0 TO 9.3	1 TO 7	7C

COEFFICIENT OF VARIANCE 10%
\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

	<u>1991</u>	1990	<u>1989</u>
PLANTED	May 10	May 14	May 6
HARVESTED	October 21	November 7	October 30-31
SOIL TYPE	Montcalm-McBride	Montcalm-McBride	Montcalm-McBride
	Sandy Loam	Sandy Loam	Sandy Loam
PREVIOUS CROP	Potatoes	Potatoes	Potatoes
POPULATION	28,100	22,600	19,200
ROW WIDTH	30"	30"	30"
FERTILIZER	180-0-120	150-15-60	232-60-75
SOIL TEST: PH	6.2	5.4	6.0
P	310 (very high)	429 (very high)	428 (very high)
K	151 (low)	175 (medium)	296 (high)
IRRIGATION	5.5 inches	6.2 inches	8 inches

FARM COOPERATOR: Richard Crawford, Montcalm Research Farm, Entrican COUNTY EXTENSION DIRECTOR: Donald Smucker, Stanton EXTENSION AGRICULTURAL AGENT: George Atkeson, Stanton

## TABLE 11 NORTH CENTRAL MICHIGAN ZONE 3 MASON COUNTY - IRRIGATED TRIAL ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

		% MOIS			BUSHEL	S PER	ACRE	% STAL	K LOI	DGING
HYBRID (BRAND-VARIET)		1991	YR	YR	1991	YR	YR	1991	YR	YR
FUNK'S	G-BRAND 4120	19.7			193.9			2.0		
RENK	RK430	19.8	21		166.0	152		4.9	4	
STINE	860	20.0			177.9			4.4		
DEKALB	DK401	20.1			166.4			4.7		
NORTHRUP KING	N3624	20.2	21	19	194.8	179	168	1.0	1	1
UAPX	15011	20.2			179.1			2.0		
KING AGRO	K2204	20.2	21		174.2	165		2.9	2	
PICKSEED SUPER CROST	83-282 1900	20.5	22		192.4 201.1	197		2.9	3	
PROVICO	PRO540X	21.0			162.0			2.0		
JACOUES	4120	21.1			184.1			3.9		
WOLVERINE	W156	21.4	23		158.5	162		2.6	. 3	
ASGROW	RX406	21.5	23	21	170.2	164	156	4.9	5	3
PIONEER	X9310	21.7			231.6			1.5		
COUNTRYMARK	C323X	21.8			168.9			3.6		
CROW'S	167	21.8	21		160.0	157		4.9	3	
PICKSEED	5545	21.8	22		182.1	166		3.0	3	
DAIRYLAND	DX-1100 2437	21.9	23		209.9 193.4	195		4.9 3.9	4	
CARGILL PIONEER	XO215	22.1			236.2			0.0		
CDRAM LAVEC	CT AAC				102.0	100			4	
GREAT LAKES KING AGRO	GL446 K416	22.2	23	21	193.9	188 181	164	2.5	3	3
PICKSEED	5665	22.2	22		198.6	177		3.4	3	
CARGILL	2927	22.3			186.5			4.0		
CALLAHAN	C725	22.3	22		177.9	168		2.9	4	
FUNK'S	G-BRAND 4140	22.5			179.0			2.5		
RENK	RK534	22.5	22		182.7	171		2.9	3	
RENK	RK505	22.6	22		154.3	135		5.9	5	
CARGILL TOP FARM	3427 TFsx1195A	22.8	23		211.0 172.1	163		2.0	4	
AMCORN	PSX3333	22.9	23	21	175.4	157	145	2.5	4	4
CALLAHAN	27128X	22.9	23		157.7	13/	143	4.9		
FUNK'S	G-BRAND 4260	23.0	24		192.2	174		1.0	1	
GREAT LAKES	GL438	23.0			171.7			2.5		
TERRA	TR940	23.0	23		190.2	173		3.4	. 4	
UAPX	15012	23.1			209.7			1.5		
COUNTRYMARK	C432X	23.1			193.9			3.4		
RENK	RK602	23.1			202.2 183.3			1.5		
CALLAHAN	Exp.1-191 C729	23.1	23		171.3	161		4.4	3	
GREAT LAKES	GL459	23.2	23		188.8	169		1.0		
WOLVERINE	W133	23.2	23		192.8	167		1.0	4	
PIONEER	3751	23.3	24	21	203.5	190	175	4.0	4	3
NORTHRUP KING	N4242	23.4			202.1			3.4		
STINE	900	23.4			171.4			2.5		
TOP FARM	TFsx1097A	23.4			171.4			1.5		
CROW'S	179	23.6			186.0			3.4		
NORTHRUP KING GREAT LAKES	N3808 GL496	23.7			196.8			5.4		
DAIRYLAND	STEALTH-1201	23.9			208.4 219.0			1.5		
JUNG	2514	24.0			176.9			2.5		
FUNK'S	G-BRAND 4160		24		189.0	172		2.5	2	
JACQUES	4770	24.1	23		201.6	185		1.5	3	
ANDERSONS	PSX250	24.1			160.1		-	3.4	-	

		& MOIS			BUSHEL			& STAI	K LO	DGIN
HYBRID (BRAND-VARIETY		1991	YR	YR	1991	YR	YR	1991	YR	YR
PICKSEED FUNK'S STINE JUNG BLANEY	83-280 G-BRAND 4299 1015 2696 B505	22.3 23.3 23.3 23.8 24.4	25  25  25	22	182.0 203.4 176.7 196.1 175.1	181	173	4.2 2.5 4.4 4.9 3.4	2 2	1
TERRA BLANEY FUNK'S TERRA KING AGRO	TR1010 B405 Exp.2078X Exp.190 K402	24.6 24.7 24.8 24.8 24.9	24	=======================================	188.1 193.1 193.7 187.8 204.7	162		2.9 3.4 0.5 2.9 2.5	2	===
RENK TERRA UAPX *PIONEER PAYCO	RK646 TR1020 15013 3573 648	24.9 25.5 25.8 25.9 26.1	26 27  27	24	186.2 175.7 196.3 237.7 179.0	161 167 207	194	1.0 0.5 2.0 2.9 2.0	2 2 2 2 2 2 2	2
*STINE KING AGRO CROW'S CROW'S COUNTRYMARK	1077 K451 414 227 C502X	26.2 26.6 27.0 27.2 27.3	27 28	=======================================	215.6 198.7 180.2 187.4 201.4	158 164	==	2.5 1.5 5.4 1.0 3.4	4	=
AMCORN *CARGILL CARGILL DYNA-GRO PROVICO	PSX5757 4327 5157 5351 PRO760X	27.3 27.4 27.4 27.5 27.7	28 28 29	==	203.0 221.6 199.7 177.3 206.6	193 190 155		1.5 3.4 1.0 1.5 2.5	3 1 1	==
*GREAT LAKES PROVICO GREAT LAKES RUPP *PIONEER	GL536 PRO751 GL499 XR1639 3475	27.8 27.8 27.9 27.9 28.0	29  28		218.2 191.1 211.4 200.8 227.0	175  209	   193	1.5 4.4 3.5 4.9 2.1	3	2
GREAT LAKES CROW'S *KING AGRO COUNTRYMARK CALLAHAN	GL579 380 K5574 C565X 27199X	28.1 28.1 28.6 28.6 28.6	29 29 30	27	212.5 206.0 219.1 184.2 184.1	204 178 193	177	5.4 3.4 5.9 2.5 1.0	4 5 4 	3
PIONEER ASGROW CARGILL SUPER CROST GOLDEN HARVEST	3527 RX578 37012 2989 H-2465	28.8 28.9 28.9 29.0 29.0	30 29  30	26	212.4 178.8 190.6 178.4 206.0	194 163  181	150	0.0 2.9 2.0 2.1 2.9	0 2  2	2
BLANEY PROVICO *BLANEY PROVICO CALLAHAN	B603 PRO790 B607wx PRO811 24448X	29.2 29.6 29.8 29.9 30.0	30 30	=======================================	206.9 201.2 220.5 186.4 195.3	196 170		2.0 5.4 2.0 1.0 2.0	3	
AMCORN *CALLAHAN CALLAHAN RENK GOLDEN HARVEST	PSX7450 27188X C748 RK702 H-2485	30.1 30.3 30.5 30.6 31.0	=======================================	=	204.7 224.0 184.8 180.2 193.1		=======================================	3.6 2.5 1.5 2.0 1.5	==	
WOLVERINE ASGROW GREAT LAKES GREAT LAKES	W167 RX626 GL577 GL569 RK721	31.2 31.2 31.4 31.5 32.1	30	== 7	199.5 172.5 196.2 211.8 192.6	168  174	==	2.5 3.9 1.0 1.5 2.5	3	

	Parada a depart	% MOIS			BUSHEL			% STAL		
HYBRID (BRAND-VARIETY	)	1991	YR	YR	1991	YR YR	yr	1991	YR	3 YR
ASGROW	RX409	24.2	24		172.4	168		2.5	2	
SUPER CROST	1999	24.3			185.1	- Val		2.5		
JUNG	2496	24.3	24		186.0	182		5.4	5	
PAYCO	687	24.3	-		188.9			5.9		100
GOLDEN HARVEST	H-2349	24.3			203.2	37	-	2.9		
CALLAHAN	C743	24.5	24		184.4	170		3.9	5	
SUPER CROST	2000	24.6			182.1			2.5		
*STINE	1021	24.6			212.3		-	1.5		-
AMCORN	PSX4343	24.6			163.3			1.0		100
GREAT LAKES	GL468	24.7		)	185.1			3.0		-
*DAIRYLAND	STEALTH-1198	24.7			215.8			2.9		
AMCORN	PSX5555	24.9	25		192.9	169		5.9	5	
*GOLDEN HARVEST	H-2331	25.1	25		215.9	206		3.4	4	
ASGROW	RX469	25.2	25		201.9	182		2.5	3	
TOP FARM	TFsx1101	25.3	26		200.7	187		2.5	2	
KING AGRO	GG955	25.4	26	23	193.2	180	169	4.4	4	2
RUPP	XR1505	25.6		-	188.2			0.5		
GREAT LAKES	GL482	25.7	25	23	175.3	167	152	3.4	4	4
GREAT LAKES	GL450	25.7			198.5			2.5		
*ANDERSONS	PSX290	26.0	27		215.1	192		3.4	2	
*GOLDEN HARVEST	H-2390	27.3			210.7			6.4		
DEKALB	DK485	28.1	27		186.1	183		4.4	5	
PROVICO	PRO630X	29.4			120.2		-	41.2		
AVERAGE		23.2	23	21	188.3	175	161	3.6	3	3
		19.7	21	19	120.2	135	145	0.0	1	1
RANGE		TO	TO	TO	TO	TO	TO	TO	TO	TO
		29.4	27	23	241.2	208	175	41.2	5	4
LEAST SIGNIFICA	NT	1.9			19.7					
COEFFICIENT OF	VARIANCE	11%								

	% MOIS	TURE		BUSHEL	S PER		% STAL	K LO	
HYBRID (BRAND-VARIETY)	1991	YR	YR	1991	YR	YR	1991	YR	YR
GOLDEN HARVEST EX545 PROVICO PRO880	32.8			193.8			0.5		
COUNTRYMARK C682X	36.8			198.1			1.0	_==	
AVERAGE	28.1	28	25	197.5	178	177	2.6	2	2
RANGE	22.3 TO 36.8	24 TO 34	22 TO 27	172.5 TO 237.7	155 TO 209	150 TO 194	0.0 TO 5.9	0 TO 5	TO 3
LEAST SIGNIFICANT DIFFERENCE COEFFICIENT OF VARIANCE	1.1			17.3					

1990 1991 May 11 PLANTED May 18 HARVESTED October 9 SOIL TYPE Arenac Loamy Sand PREVIOUS CROP Snap beans-rye cover POPULATION 26,600 24,400 ROW WIDTH 30" 30" FERTILIZER 109-23-30+10 tons manure SOIL TEST: PH 6.8 169 (very high) 328 (very high) IRRIGATION 4 inches 1 inch

1989

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-1991, 1990, 1989

		& MOIS	chardronical reduc		BUSHEL	S PER	ACRE	% STAL	K LOI	GING
HYBRID (BRAND-VARIETY		1991	YR YR	yr	1991	YR	yr	1991	YR	yr
DEKALB	DK401	17.8			191.0			2.7		
STINE	860	18.0			170.7			2.7		
FUNK'S UAPX	G-BRAND 4120 15011	18.1		=	208.2 170.7			1.6	==	Ξ
KING AGRO	K2204	18.5	20		180.1	163	1-1-1	2.1	4	
NORTHRUP KING	N3624	-18.6	21 21	20	199.2	179	178	0.8	2	2
RENK	RK430	18.7			172.5	155	==	3.2	4	
PICKSEED JACQUES	83-282 4120	18.8	=		184.2	II		3.2	==	
PROVICO	PRO540X	18.8			184.2 172.2			1.5		
CROW'S	167	18.9	20		157.2	152		4.0	5	
CARGILL	2927	19.1		==	198.1	187		4.1		
SUPER CROST ASGROW	1900 RX406	19.2	22	20	198.1 183.7	168	168	2.3	6 7	5
COUNTRYMARK	C323X	19.2		-	168.9			3.8		
PICKSEED	5545	19.2	21 21	21	187.0 192.1 171.8 173.9	171	173	1.2	2 7	2
CALLAHAN	C725	19.3	21	19	192.1	174	175	2.3	7	5
CARGILL RENK	2437 RK505	19.5	21	21	173.9	150	149	3.8	4	4
TERRA	TR940	19.6	22		197.6	175		2.2	7	
FUNK'S	G-BRAND 4140	19.7			187.1 197.3			2.7		
GREAT LAKES	GL446	19.7	22 21	22	197.3	182	178	2.7	4	3 4
RENK WOLVERINE	RK534 W133	19.7	21	23	181.4	156	161	1.6	5 5	4
TOP FARM	TFsx1195A	19.7	22		190.9	172		2.1	9	
PICKSEED	5665	19.7	21 21 22	21 20	192.3	174	181	2.3 2.4 2.4 2.2	3	3
AMCORN	PSX3333	19.7	21	20	194.8	169	163 173	2.4	4	3
KING AGRO	K416	19.8			175.3			2.2		
PIONEER	XO215	19.9			228.6			0.8		
UAPX	15012	19.9			213.6			0.8	-	-
DAIRYLAND GREAT LAKES	DX-1100 GL459	20.0	23	TE S	207.6	187	==	2.2	4 3	
NORTHRUP KING	N3808	20.1			199.9	'		3.5		
CARGILL	3427	20.1	22		210.7	194	/	3.5 2.7	5	
WOLVERINE	W156	20.2	22	22	188.0	173	167	1.8	4	3
CALLAHAN	C729 RX409	20.2	22	20	176.7	161	164	2.6	3 2	2
RENK	RK602	20.3	-11		184.0			2.5		
FUNK'S	G-BRAND 4160	20.4	22		191.7	170		1.0	3	
NORTHRUP KING	N4242	20.4			207.3			3.1		
*PIONEER	3751	20.4	22	21	212.9	187	178	2.7	4	3
RUPP GREAT LAKES	Exp.1-191 GL438	20.4	=	-	185.1			1.6		11
COUNTRYMARK	C432X	20.6			201.0		( <del>-1</del> 19)	2.4		
JUNG	2496	20.6	23	21	193.8	177	181	3.8	4	4
*PIONEER	X9310	20.7		=	218.5	==	71	0.8		- 177 ×
TOP FARM FUNK'S	TFsx1097A G-BRAND 4260	20.8	22		197.1	172		1.6	1	
GOLDEN HARVEST	H-2331	20.8	22 23	22	216.3	202	188	2.6	5	4
JACQUES	4770	20.9	23		214.8	194		1.1	2	
SUPER CROST	2000	21.0			191.4		-	1.6		=
*DAIRYLAND SUPER CROST	STEALTH-1198	21.0			219.4 192.1		1000	1.7		
ANDERSONS	PSX250	21.1	OF SERVICE	LAL BROOM	181.3	The State of	THE THE	2.1	E STEEL	AND THE ROOM

LATE TRIAL (101	DAY RELATIVE	MATURIT	Y OR	LATER	(BAS	ED O	N COM	PANY RA	ATING)		
		% MOIS	CONTRACTOR CONTRACTOR		BU	SHEL	S PER	ACRE	STAL	K LOI	OGING
HYBRID (BRAND-VARIETY	)	1991	YR	YR	19	91	YR	YR	1991	YR	YR
PICKSEED FUNK'S STINE JUNG BLANEY		19.9 20.3 21.0 21.0 21.6	24	22  23	18 20 18 20	8.3 4.7 5.0 4.8 0.5	183  167	179  167	2.2 2.3 3.1 5.3 2.5	2	2  -3
FUNK'S TERRA TERRA BLANEY KING AGRO	Exp.2078X Exp.190 TR1010 B405 K402	21.7 21.7 21.7 21.8 21.9	24	24	18 19 18	6.5 19.8 14.1 18.7	172	 171 	1.3 2.8 2.4 5.0 1.8	  	  2 
PAYCO UAPX TERRA RENK *PIONEER	648 15013 TR1020 RK646 3573	22.0 22.1 22.2 22.2 22.4	25 25 25 25	  23	18 19	5.8 00.1 18.9 11.4 17.6	174 167 207	   199	1.5 2.4 1.1 2.0 2.5	 6 2 4	
CROW'S GREAT LAKES KING AGRO CROW'S COUNTRYMARK	227 GL499 K451 414 C502X	22.5 22.8 22.8 22.8 22.9	25  25 	= = =	18 19	2.8 4.8 6.1 0.5 4.3	168  168	==	0.7 2.6 1.7 4.3 2.1	2   5 	=======================================
GREAT LAKES *PIONEER *STINE CARGILL PROVICO	GL536 3527 1077 4327 PRO751	23.1 23.3 23.3 23.4 23.5	26 26 27		22 20 20	5.8 4.9 9.8 18.5 19.6	205 187 178	183	2.5 0.5 2.1 2.6 2.7	0  3 3	  2
PROVICO CARGILL AMCORN CARGILL *PIONEER	PRO760X 37012 PSX5757 5157 3475	23.5 23.5 23.5 23.6 23.7	  26 26	25 24	19 20 19	6.7 7.8 3.9 7.1 2.4	183 198	180 184	1.8 2.1 2.5 2.1 1.0	  3 1	  2 2
*KING AGRO DYNA-GRO ASGROW CALLAHAN GREAT LAKES	K5574 5351 RX578 27199X GL579	24.0 24.1 24.2 24.2 24.3	27 26 26  27	26 25 27	19	4.1 9.6 0.2 15.9 16.4	192 156 170  198	183 165 191	5.7 1.5 1.8 1.9 3.5	5 2 2 	-4 -2 -3
CROW'S *BLANEY RUPP SUPER CROST COUNTRYMARK	380 B603 XR1639 2989 C565X	24.3 24.4 24.5 24.6 24.6	27   	=======================================	21 18 18	2.2 0.2 8.6 5.4 1.7	172   	=	3.6 0.8 3.2 3.0 3.0	7   	
GOLDEN HARVEST AMCORN CALLAHAN PROVICO PROVICO	H-2465 PSX7450 24448X PRO811 PRO790	24.6 24.6 24.7 24.9 24.9	27  27	=======================================	20	07.0 03.7 06.6 90.4 96.0	185  171	=======================================	2.7 1.7 1.3 1.5 3.0	4	= = = =
RENK CALLAHAN BLANEY ASGROW GOLDEN HARVEST	RK702 C748 B607wx RX626 H-2485	25.1 25.3 25.5 25.6 25.7	28 28 28	0  26 	11 20 11	89.6 88.7 01.3 85.5 05.5	179 173	153  172	2.2 0.8 1.3 2.8 1.1	4 3	2  2 
GREAT LAKES WOLVERINE GREAT LAKES CALLAHAN RENK	GL577 W167 GL569 27188X RK721	26.0 26.0 26.1 26.2 26.3	30	28	19	95.9 00.8 94.9 07.4 06.2	179	173	1.2 1.4 2.8 2.2 2.5	  2	

		NOISTURE 2 3			BUSHELS PER ACRE			& STALK LODGING		
HYBRID (BRAND-VARIETY)		1991			1991	YR	YR	1991	YR	YR
GOLDEN HARVEST CALLAHAN CALLAHAN DAIRYLAND CROW'S	H-2349 C743 27128X STEALTH-1201 179	21.1 21.1 21.1 21.2 21.2	23 	22  	207.0 198.5 183.7 211.0 179.7	178  	174 	1.9 3.9 2.9 1.3 2.8	5  	3  
GREAT LAKES PIONEER JUNG AMCORN GREAT LAKES	GL496 3733 2514 PSX5555 GL482	21.4 21.4 21.4 21.4 21.7	24 24 23	  23 22	208.6 221.9 182.7 199.1 187.9	199 177 173	178 165	3.3 1.9 1.9 2.7 2.1	 2  4 3	  4 3
GREAT LAKES PAYCO GREAT LAKES ASGROW AMCORN	GL468 687 GL450 RX469 PSX4343	21.8 21.8 21.9 21.9 21.9	24	=	178.2 199.6 209.1 204.4 163.7	183	=======================================	1.6 4.0 2.8 1.9 2.1	-4	=======================================
STINE DEKALB PROVICO TOP FARM RUPP	1021 DK485 PRO630X TFsx1101 XR1505	22.0 22.1 22.1 22.3 22.5	24 24	24  	203.9 209.1 166.6 200.2 186.2	194 183	182	1.3 2.4 14.9 2.8 0.8	4 5	3
ANDERSONS KING AGRO GOLDEN HARVEST	PSX290 GG955 H-2390	22.6 22.7 22.9	25 25	25 23 	211.3 197.6 208.9	190 178	184 174	1.8 2.3 3.1	2 2	2 2
AVERAGE		20.4	22	21	193.4	176	173	2.5	4	3
RANGE		17.8 TO 22.9	20 TO 25	19 TO 25	157.2 TO 228.6	150 TO 202	149 TO 188	0.8 TO 14.9	TO 9	2 TO 5

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

		% MOIS	TURE		BUSHEL	S PER	ACRE	% STALK LODGING		
HYBRID (BRAND-VARIETY)		1991	YR	yr	1991	YR	yr	1991	YR	YR
PROVICO	EX545 PRO880 C682X	26.5 27.3 29.2	==	Ξ	201.0 200.0 199.8	=	=	1.9 1.9 0.3	=	Ξ
AVERAGE		23.8	26	25	198.5	180	179	2.2	3	2
RANGE		19.9 TO 29.2	24 TO 30	22 TO 28	169.6 TO 237.6	156 TO 207	165 TO 199	0.3 TO 5.7	0 TO 7	TO 4

### TABLE 13 NORTHERN MICHIGAN ALPENA COUNTY TRIAL

ZONE 4

ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

HYBRID	100	% MOIS		3	BUSHELS PER		% STAL		
(BRAND-VARIET	7)	1991	YR	YR	1991 YR	YR	1991	YR	YR
PAYCO	239	20.8			101.3		7.5		
PICKSEED	2600	21.5	21		88.9 103		6.5	8	
GREAT LAKES	GL226	21.8			91.0		2.7		
DEKALB	DK352	22.1			92.9		2.2		
PICKSEED	2700	22.1	21		94.3 103		10.2	11	-
PROVICO	PRO510X	22.2			98.2		3.2		
*PIONEER	3897	22.3	22		115.6 124		2.7	1	
PROVICO	PRO520X	22.4			111.1		1.1		
NORTHRUP KING	X100	22.5			105.5		6.5		
JACQUES	2750	23.8	22		96.5 93		2.7	6	
PROVICO	PRO500X	23.9			86.0	1	5.0		
PICKSEED	2855	23.9	23	21	93.4 99	95	4.3	4	3
JUNG	2378	24.1		-	99.3		3.8		
*UAPX	15011	24.3			114.0		3.8		
*PIONEER	3921	24.8			111.4		4.3		
NORTHRUP KING	N2001	25.0	23	22	103.0 107	97	10.2	11	8
JUNG	2365	25.1	23		93.6 104		11.3	8	
PAYCO	248	25.4			93.0	3/4-	3.8		-
STINE	860	25.5			90.1		8.6		
GREAT LAKES	GL306	25.7			86.8		3.8		
CROW'S	167	25.7	23		100.2 100		4.3	7	N NA
JACQUES	3220	25.9	-		99.0		5.9	-	
SUPER CROST	1548	26.2	23	23	80.5 93	86	8.1	7	6
BLANEY	B106	26.8	23.	23	86.2 100	94	5.4	7	4
GREAT LAKES	GL350	26.8	24	-	83.2 89	A TOTAL	9.1	6	
*NORTHRUP KING	X279	26.9			111.9		7.0		
STINE	900	27.0			96.9		9.7	-	
JACQUES	4120	27.3	24		92.7 113		3.2	3	-
NORTHRUP KING	X209	27.3			96.7		5.9		
PROVICO	PRO540X	27.7		-	86.2	<u> </u>	4.3		
SUPER CROST	1594	27.8	24	24	96.8 110	110	3.8	4	3
DAIRYLAND	DX-1190	27.9	25		92.9 106		10.2	8	
UAPX	15010	28.3			103.4		5.9		
DAIRYLAND	DX-1192	28.8	25		87.4 105		3.2	4	-
*PIONEER	3779	28.9	25	24	116.5 109	93	.2.2	2	2

HYBRID		& MOIS	TURE	3	BUSHEL	S PER	ACRE	% STAL	K LOI	
(BRAND-VARIETY)		1991	YR	YR	1991	YR	YR YR	1991	YR	YR
PICKSEED JUNG *PIONEER CARGILL BLANEY	5545 2444 3733 2437 B305	29.8 29.9 30.1 30.5 30.6	28 26 28 		89.3 91.4 121.3 93.5 88.5	99 106 125		2.7 4.3 1.1 3.2 9.1	8 3 1 	==
RUPP CARGILL PICKSEED PIONEER *PIONEER	Exp.1-198 2927 5665 XO215 3751	31.8 31.9 31.9 32.6 32.7	28  29	27	80.1 91.0 97.4 103.6 118.8	105  113	== == == 111	3.8 2.7 3.8 1.6 3.8	5	   3
*GREAT LAKES GREAT LAKES JUNG *GREAT LAKES PIONEER	GL446 GL450 2496 GL438 X9310	33.4 34.3 34.6 34.7 35.1	30	=	123.5 97.9 96.5 114.0 105.3	132 114 		2.7 4.3 9.1 1.6 0.5	6	=======================================
DAIRYLAND CROW'S CARGILL	DX-1100 179 3427	35.2 36.1 38.4	32	Ξ	95.5 89.8 108.9	125	==	5.4 4.3 4.8	 4	=
AVERAGE		27.8	25	23	98.2	107	98	4.9	5	4
RANGE		20.8 TO 38.4	21 TO 32	21 TO 27	80.1 TO 123.5	89 TO 132	86 TO 111	0.5 TO 11.3	1 TO 11	2 TO 8
LEAST SIGNIFICAN DIFFERENCE COEFFICIENT OF		1.9			13.1				-	

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

(continued next column)

	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)

1990	
May 18	
November 16	
Selkirk Loa	
Navy beans	
16,000	
30"	
124-96-96	
7.1	
50 (medium)	
187 (medium	1)
	A SECTION

1989
May 19
November 3
Selkirk Loam
Kidney beans
17,600
30"
98-72-72
6.2
118 (very high)
168 (medium)

FARM COOPERATOR: Allen Schiellard, Hubbard Lake COUNTY EXTENSION DIRECTOR: John Middleton, Alpena

### TABLE 14 NORTHERN MICHIGAN ZONE 4 GRAND TRAVERSE COUNTY TRIAL ONE, TWO, THREE YEAR AVERAGES-1991, 1990 \*\*, 1989

HYBRID (BRAND-VARIET)	7)	% MOIS		E	BUSHEL 1991	S PER ACRE 2 YR	-	STAL	K LOI 2 YR	OGING
*PROVICO *DEKALB GREAT LAKES JACQUES NORTHRUP KING	PRO510X DK352 GL226 3220 X100	17.0 17.1 17.4 17.5 17.6	=======================================	]	134.1 133.2 122.4 113.0			2.7 2.2 7.0 9.7 5.4		
PAYCO PICKSEED UAPX *PROVICO PAYCO	239 2700 15011 PRO520X 248	17.9 17.9 18.0 18.0	   17	] ] ]	23.9 106.7 126.3 132.7 124.8			3.8 3.2 4.3 4.3 5.9	   10	
PROVICO JUNG NORTHRUP KING PICKSEED *SUPER CROST	PRO500X 2365 N2001 2855 1594	18.2 18.2 18.3 18.4 18.6	18 22 18	. ]	131.2 110.2 103.2 116.3	99 92 126		3.4 5.4 4.8 7.5 3.8	10 23 13	
GREAT LAKES PIONEER JUNG PICKSEED SUPER CROST	GL306 3779 2378 2600 1548	18.7 18.8 18.8 18.8 18.9	=	]	114.3 128.2 118.8 117.4 104.4	=		7.0 4.8 7.5 3.2 3.8	== ,	
JACQUES STINE BLANEY GREAT LAKES JUNG	2750 860 B106 GL350 2444	18.9 18.9 19.0 19.0	18		116.4 112.6 118.0 123.6 125.1	112		4.8 4.3 3.8 2.7 5.9	11	
DAIRYLAND CROW'S DAIRYLAND JACQUES PIONEER	DX-1192 167 DX-1190 4120 3921	19.3 19.5 19.9 20.2 20.2	20		110.8 101.4 119.4 120.4 101.6	110 		5.9 3.8 5.4 5.9 0.5	5	
STINE PIONEER BLANEY *NORTHRUP KING CARGILL	900 3897 B305 X209 2437	20.2 20.4 20.8 20.9 21.4	21		129.6 109.9 114.2 133.8 115.7	104		3.8 0.0 5.4 4.8 2.7	7	

HYBRID		% MOIS	TURE 2	BUSHEL	S PER ACRE	% STAL	K LOL	)GI
(BRAND+VARIETY)		1991	YR	 1991	YR	1991	YR	
PIONEER UAPX *PICKSEED PROVICO CARGILL	3751 15010 5665 PRO540X 2927	21.5 21.5 21.5 21.6 21.7	20	128.5 107.9 132.4 131.9 115.2	115 	3.2 2.7 3.8 1.1 5.9	4	
NORTHRUP KING RUPP GREAT LAKES CROW'S PICKSEED	X279 Exp.1-198 GL438 179 5545	21.8 22.3 22.4 22.9 22.9		118.2 113.8 111.8 100.3 128.6	    112	7.0 3.2 4.3 3.2 5.4	  9	
GREAT LAKES *JUNG CARGILL *PIONEER DAIRYLAND	GL446 2496 3427 XO215 DX-1100	23.2 23.3 23.5 23.8 24.0	21  	121.8 134.4 125.8 153.3 127.8	115	5.9 5.9 4.8 3.2 3.8		
*PIONEER *PIONEER GREAT LAKES	3733 X9310 GL450	24.1 24.3 25.0	=	146.2 134.6 127.4		4.3 4.3 3.8	==	
AVERAGE		20.2	20	 121.2	110	4.4	10	
RANGE		17.0 TO 25.0	17 TO 22	 100.3 TO 153.3	92 TO 126	0.0 TO 9.7	4 TO 23	
LEAST SIGNIFICAN DIFFERENCE COEFFICIENT OF V	T ARIANCE	.9 9 <b>1</b>		 10.9				

(continued next column)

1990 \*\* No trial

	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)

1989
May 11
November 1-2
Coventry-Newaygo Loam
Corn
18,000
30"
84-24-66
6.5
656 (very high)
368 (very high)

FARM COOPERATORS: Richard Dennett (1991), George Svec (1989), Buckley COUNTY EXTENSION DIRECTOR: Richard Strong, Traverse City EXTENSION AGRICULTURAL AGENT: Erwin Elsner, Traverse City

### TABLE 15 NORTHERN MICHIGAN ZONE 4 MENOMINEE COUNTY TRIAL ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

		% MOIS			BUSHEL			% STAL			
HYBRID			2	3		2	3	and the same of th	2	3	
(BRAND-VARIET		1991	YR	YR	1991	YR	YR	1991	YR	YR	
PIONEER	3963	17.4			94.2			3.0			
PICKSEED	2855	19.0	22	23	123.9	105	106	14.9	15	10	
DEKALB	DK352	19.1			97.3	103	100	10.9		10	
WOLF RIVER VAL		19.2			100.4			4.0			
PROVICO	PRO510X	19.2			103.6			10.0			
PAYCO	239	19.2			123.0			16.2			
GREAT LAKES	GL226	19.3			119.3			22.8		-	
PIONEER	3897	19.8	24		125.7	96		7.4	12		- 2
PAYCO	248	20.0			113.2			20.1			,
WOLF RIVER VAL		20.1	25	25	110.4	94	98	4.3	5	4	
WODE KIVER VAL					110.4			4.3			
PROVICO	PRO520X	20.1			133.3			8.2			
UAPX	15011	20.2			148.0		-	6.3	-		
PIONEER	3845	20.6			123.0			2.7	-		
PICKSEED	2600	20.6	24		111.3	83		11.2	12		
NORTHRUP KING	X100	20.7	==		106.2			6.6			
PICKSEED	2700	21.0	25		135.0	104		17.0	16		
JACQUES	2750	21.1	26	25	116.9	102	105	9.9	11	9	
	2378				110.9						
JUNG		21.1			108.6			3.6			
GREAT LAKES	GL306	21.3			119.5			14.3			
NORTHRUP KING	N2001	21.4	25	25	134.1	108	114	23.6	18	13	
BLANEY	B106	21.6	26	26	124.5	97	105	10.9	9	6	7
JUNG	2365	21.8	27	27	137.7	110	110	23.0	16	11	
PROVICO	PRO500X	21.9			101.4			5.4			
STINE	860	21.9			122.0			16.1			
CROW'S	167	21.9	27			99			6		
CYOM 2	10/	21.9	21		125.2	99		8.0			
SUPER CROST	1594	22.0	30		125.3	100		13.1	14		
GREAT LAKES	GL350	22.0	26		123.8	98		13.9	17		
PIONEER	3779	22.0	28	29	144.6	112	111	5.0	3	2	
NORTHRUP KING	X279	22.2			157.6			13.5			
PROVICO	PRO540X	22.2			125.1			10.3			
STINE	900	22.3			125.5			15.7			
JACQUES	3220	22.4			132.0			9.0			. 12
UAPX	15010	22.4			110.8			14.0			
NORTHRUP KING	X209	22.6			131.2			11.5			
PIONEER	3921	22.7			127.0			2.1			

		% MOIS			BUSHEL			% STAI		
HYBRID (BRAND-VARIE	ry)	1991	YR	YR	1991	YR	YR 3	1991	YR	YR
DAIRYLAND *PICKSEED SUPER CROST DAIRYLAND CARGILL	DX-1192 5545 1548 DX-1190 2927	22.8 22.8 22.9 23.0 23.2	28 33 27 28	=======================================	121.6 145.5 102.5 121.8 137.0	98 106 89 97	==	16.1 13.3 7.3 15.0 6.5	11 12 8 11	
PICKSEED *JUNG JACQUES *PIONEER BLANEY	5665 2444 4120 3751 B305	23.4 23.5 23.6 23.9 24.3	28 29 28 29	31 30	131.3 150.2 127.4 176.3 137.0	109 114 113 129	106 125	20.8 5.8 12.3 19.6 16.8	14 8 12 14	5  9
CARGILL PIONEER *PIONEER GREAT LAKES CROW'S	2437 3733 XO215 GL438 179	24.5 24.6 24.7 25.6 25.6	34	=======================================	121.4 123.3 148.9 114.3 113.4	105		2.6 3.6 5.8 11.8 13.8	4	=======================================
RUPP *DAIRYLAND *PIONEER GREAT LAKES GREAT LAKES	Exp.1-198 DX-1100 X9310 GL450 GL446	25.8 27.0 27.1 27.5 29.0	34		115.7 150.5 148.7 132.8 127.4	109		2.1 5.2 1.0 10.9 12.0	10	==
JUNG CARGILL	2496 3427	29.1 29.2	34 34	36	122.8 130.4	106 110	109	9.5 3.9	9	_6
AVERAGE		22.6	28	28	125.6	104	109	10.6	11	7
RANGE		17.4 TO 29.2	22 TO 34	23 TO 36	94.2 TO 176.3	83 TO 129	98 TO 125	1.0 TO 23.6	3 TO 18	2 TO 13
LEAST SIGNIFIC DIFFERENCE COEFFICIENT O	F VARIANCE	1.1			12.0					

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

(continued next column)

1	1991	1990	1989
PLANTED	May 13	May 3	May 9
HARVESTED	October 16-17	November 8	October 11
SOIL TYPE	Onaway Loam	Onaway Loam	Onaway Loam
PREVIOUS CROP	Corn	Corn	Corn
POPULATION	27,800	23,300	19,800
ROW WIDTH	34"	34"	34"
FERTILIZER '	122-30-30	122-30-30+10 tons manure	124-30-66+10 ton manure
SOIL TEST: PH	7.3	7.3	7.3
P	97 (high)	97 (high)	97 (high)
K	168 (medium)	168 (medium)	168 (medium)

FARM COOPERATOR: Steve Berzsenyi, Stephenson
MSU COOPERATOR: Dr. Richard Leep, Dept. Crop & Soil Science, Marquette
COUNTY EXTENSION DIRECTOR: Michael Erdman, Stephenson

## TABLE 16 NORTHERN MICHIGAN ZONE 4 AVERAGE OF ALPENA, GRAND TRAVERSE & MENOMINEE COUNTY TRIAL ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

	% MOISTURE		BUSHEL	BUSHELS PER ACRE			% STALK LODGING			
HYBRID (BRAND-VARIETY)	)	1991	YR	YR	1991	YR	YR	1991	YR	3 YR
PAYCO DEKALB GREAT LAKES PROVICO *PROVICO	239 DK352 GL226 PRO510X PRO520X	19.3 19.4 19.5 19.5 20.2			116.1 107.8 110.9 112.0 125.7			9.2 5.1 10.8 5.3 4.5	==	
NORTHRUP KING PICKSEED PICKSEED PICKSEED PIONEER	X100 2700 2600 2855 3897	20.3 20.3 20.3 20.4 20.8	22 22 22 22 23	22	108.6 112.0 105.9 111.2 117.1	102 96 103 108	101	6.2 10.1 7.0 8.9 3.4	12 9 9	
*UAPX PAYCO JACQUES PROVICO JUNG	15011 248 2750 PRO500X 2378	20.8 21.1 21.3 21.3 21.3	23	23	129.4 110.3 109.9 106.2 108.9	99	103	4.8 9.9 5.8 4.6 5.0	 8 	== 7 == 7
NORTHRUP KING JUNG JACQUES GREAT LAKES STINE	N2001 2365 3220 GL306 860	21.6 21.7 21.9 21.9 22.1	23 24 	23 25 	113.4 113.8 114.7 106.9 108.2	105	104 108 	12.9 13.2 8.2 8.4 9.7	12 10 	9 7  
CROW'S BLANEY GREAT LAKES PIONEER SUPER CROST	167 B106 GL350 3921 1548	22.4 22.5 22.6 22.6 22.7	25 24 24  24	24	108.9 109.6 110.2 113.3 95.8	98 101 97  93	101  86	5.4 6.7 8.6 2.3 6.4	6 7 10  7	5   6
SUPER CROST *PIONEER STINE NORTHRUP KING *NORTHRUP KING	1594 3779 900 X209 X279	22.8 23.2 23.2 23.6 23.6	26 25 	25 26 	118.5 129.8 117.3 120.6 129.2	108 110 	109 102  	6.9 4.0 9.7 7.4 9.2	8 3 	6 2  
DAIRYLAND DAIRYLAND JACQUES PROVICO UAPX	DX-1192 DX-1190 4120 PRO540X 15010	23.6 23.6 23.7 23.8 24.1	25 26 25 	=======================================	106.6 111.4 113.5 114.4 107.4	103 104 115	= .	8.4 10.2 7.1 5.2 7.5	7 8 7 	

	% MOIS	% MOISTURE		LS PER ACE	RE & STAI	% STALK LODGING		
HYBRID	1991	YR Y	3 R 1991	YR Y	1991	YR	YR	
(BRAND-VARIETY)	1991	IK I	EEEEEEEEE	IK II	.========	IK	1K ======	
JUNG 2444 BLANEY B305 PICKSEED 5545 CARGILL 2437 CARGILL 2927	25.2 25.2 25.5	26 2 30 -	- 113.2	111 10	10.4	5 9 	4  	
PICKSEED 5665 *PIONEER 3751 *PIONEER 3733 RUPP EXP. *PIONEER XO21	26.0 26.3 1-198 26.6	28 2	- 120.4 8 141.2 - 130.3 - 103.2 - 135.3	110 118 11 119	6 8.9	8 8 3 	5	
GREAT LAKES GL43 CROW'S 179 *GREAT LAKES GL44 *DAIRYLAND DX-1 *PIONEER X931	28.2 6 28.5 100 28.7	30 -	- 113.4 - 101.2 - 124.2 - 124.6 - 129.5	120	5.9 7.1 6.9 4.8	7 		
GREAT LAKES GL45 JUNG 2496 CARGILL 3427	29.0		- 119.4 4 117.9 - 121.7	114 11 119		7 6	5	
AVERAGE	23.6	26 2	5 115.5	107 10	6.8	8	6	
RANGE	19.3 TO 30.4	TO T	2 95.8 O TO 4 141.2		36 1.9 TO TO 16 13.2	3 TO 12	2 TO 9	
LEAST SIGNIFICANT DIFFERENCE	.8		6.8					

\*SIGNIFICANTLY BETTER THAN AVERAGE YIELD IN 1991

(continued next column)

#### TABLE 17 SOUTH CENTRAL MICHIGAN ZONE 2 INGHAM COUNTY TRIAL - SILAGE ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

HYBRID (BRAND-VARIETY	)	DRY MA	YR	3 YR	GREEN 1991	TONS WEIGHT 2 YR		DRY WE	IGHT 2 YR	3 YR
GOLDEN HARVEST RENK GOLDEN HARVEST CROW'S DEKALB	H-2349 R680 H-2331 179 DK524	49.9 47.8 47.7 45.5 42.9			13.7 13.1 14.1 11.2 18.6	=======================================	=======================================	6.8 6.3 6.7 5.1 7.9	=======================================	=======================================
GREAT LAKES GREAT LAKES COUNTRYMARK PIONEER PIONEER	GL569 GL509 C432X 3751 X9310	41.0	39.3 40.0	36.3 37.0	17.0 19.1 17.9 13.9 20.6	18.3 15.6	19.1 15.4	7.3 7.9 7.3 5.6 8.3	7.2 6.2	6.9 5.8
GREAT LAKES SUPER CROST COUNTRYMARK PIONEER GREAT LAKES	GL496 2989 C502X XO215 GL579	39.6 39.1 38.8 38.4 37.9	35.8	34.5	19.4 16.8 17.8 18.2 19.6	20.6	  21.1	7.7 6.6 6.9 7.0 7.4	7.3	7.2
GARST PIONEER DEKALB	8777 3573 DK550	37.7 36.9 36.1	34.1	33.1	17.1 18.8 21.8	20.1	20.6	6.5 6.9 7.9	6.8	6.8
AVERAGE		41.3	37.3	35.2	17.2	18.7	19.1	7.0	6.9	6.7
RANGE		TO	34.1 TO 40.0	TO	11.2 TO 21.8	15.6 TO 20.6	15.4 TO 21.1	5.1 TO 8.3	6.2 TO 7.3	5.8 TO 7.2

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,	All	analyses	were	determined	by	wet-chemical	methods

HYBRID (BRAND-VARIETY)		DMD% AVG	FD% AVG	NDF% AVG	CP% AVG	
 CROW'S	179	74.6	53.2	54.3	7.52	
COUNTRYMARK	C432X	76.2	50.5	48.2	7.43	
PIONEER	3751	76.1	49.1	47.0	8.90	
PIONEER	X9310	78.2	49.0	42.8	8.53	
COUNTRYMARK	C502X	77.2	53.1	48.6	7.39	
PIONEER	X0215	67.4	41.5	55.7	8.48	
PIONEER	3573	75.8	48.4	47.0	7.29	

DMD = Dry matter digestibility FD = Fiber digestibility NDF = Neutral detergent fiber CP = Crude protein

		DRY M		3	GREEN	TONS WEIGHT	PER	DRY WE		3
HYBRID (BRAND-VARIETY	)	1991	YR ·	YR	1991	YR	YR	1991	YR	YR
CROW'S BLANEY GOLDEN HARVEST GOLDEN HARVEST GREAT LAKES	380 B607wx H-2532 EX545 GL583	53.4 51.2 49.6 48.8 48.5	42.7	38.9	14.3 14.6 18.7 18.3 18.1	16.8	18.1	7.6 7.5 9.3 8.9 8.7	6.9	6.7
COUNTRYMARK CALLAHAN PROVICO CARGILL PROVICO	C565X C764 PRO880 SX269 PRO900	48.3 47.9 47.2 47.0 46.4	35.6		15.4 17.3 18.0 19.6 16.7	22.3	=======================================	7.4 8.3 8.4 9.2 7.7	7.4	
PIONEER GARST CALLAHAN PAYCO CALLAHAN	3357 8513 C759 900 C771	46.1 45.1 45.1 44.9 44.9	39.4	=======================================	18.9 20.7 18.5 22.4 20.9	20.4	=======================================	8.7 9.4 8.4 10.0 9.4	7.9	=
GREAT LAKES GOLDEN HARVEST PIONEER CROW'S GREAT LAKES	GL577 H-2572 3527 SL32 GL586		36.6 37.1		20.5 21.2 18.0 15.7 22.3	21.6 17.8	=======================================	9.2 9.5 8.0 6.9 9.8	7.6 6.5	=======================================
PIONEER RENK PROVICO DEKALB RENK	3394 RK76 PRO970 DK636 RK721	43.6 43.5 43.1 43.0 41.6	36.0 34.2	31.8	18.3 21.0 19.7 22.5 17.2	22.2 21.2		8.0 9.1 8.5 9.7 7.2	7.8 7.0	6.9
AMCORN PIONEER COUNTRYMARK	PSX9292 3429 C682X		38.6 36.2		18.8 23.8 22.7	21.7 26.0	26.5	7.8 9.7 9.2	8.4 9.3	8.8
AVERAGE			37.4	34.8	19.1	21.1	22.3	8.6	7.6	7.5
RANGE		40.6 TO	34.2 TO 42.7	TO	14.3 TO 23.8	16.8 TO 26.0	18.1 TO 26.5	6.9 TO 10.0	6.5 TO 9.3	6.7 TO 8.8

QUALITY ANALYSES
All analyses were determined by wet-chemical methods

HYBRID (BRAND-VARI	ETY)	DMD% AVG	FD% AVG	NDF% AVG	CP% AVG
CROW'S	380	74.3	46.0	47.5	6.94
BLANEY	B607wx	73.8	41.6	44.8	7.24
COUNTRYMARK	C565X	75.5	43.2	43.1	7.11
PROVICO	PR0880	77.2	49.3	45.0	6.67
PROVICO	PR0900	77.6	46.7	42.1	6.73
PIONEER	3357	77.0	45.0	41.7	6.15
CALLAHAN	C759	74.8	46.1	46.8	6.37
CALLAHAN	C771	75.6	37.9	39.4	6.86
PIONEER	3527	74.5	44.4	45.9	6.59
CROW'S	SL32	71.1	38.6	47.0	6.04
PIONEER	3394	74.9	44.0	44.8	6.56
AMCORN	PSX9292	75.6	46.4	45.6	6.37
COUNTRYMARK	C682X	74.7	44.2	45.3	6.59

	1991	1990	1989
PLANTED	May 5	May 8	April 27
HARVESTED	September 6,16	September 13	September 15
SOIL TYPE	Capac Loam	Capac Loam	Capac Loam
PREVIOUS CROP	Soybeans	Corn	Corn
POPULATION	24,900	20,200	19,400
ROW WIDTH	30"	30"	36"
FERTILIZER	165-50-50	165-50-50	165-50-50
SOIL TEST: PH	6.8	6.1	6.1
P	54 (medium)	93 (high)	156 (very high)
K	133 (low)	200 (medium)	228 (high)

FARM COOPERATOR: Michigan State University, East Lansing
MSU COOPERATORS: Dr. Michael Allen and David Main, Animal Science Dept.
COUNTY EXTENSION DIRECTOR: Marvin Preston, Mason
EXTENSION AGRICULTURAL AGENTS: John Hayden and Laura Rhodes, Mason

# TABLE 18 NORTH CENTRAL MICHIGAN ZONE 3 HURON COUNTY TRIAL - SILAGE ONE, TWO, THREE YEAR AVERAGES-1991, 1990, 1989

		DRY M	ATTER		GREEN	TONS WEIGHT		ACRE DRY WE		
HYBRID (BRAND-VARIETY	)	1991	YR	YR	1991	YR	YR .	1991	YR	YR
COUNTRYMARK PICKSEED SUPER CROST GREAT LAKES BLANEY	C323X 5545 1900 GL450 B405	46.9 46.8		36.6	14.5 16.4 16.8 19.5 17.8	18.3	18.6	7.2 7.7 7.9 9.1 8.3	6.8	6.6
PICKSEED PIONEER RENK DEKALB COUNTRYMARK	5665 3751 RK602 DK485 C432X	46.2	38.0 36.2		18.7 20.3 18.5 20.4 19.0	21.0 22.8	21.0	8.6 9.1 8.3 9.1 8.5	7.7	7.8
GOLDEN HARVEST PIONEER DEKALB GOLDEN HARVEST RENK	H-2349 XO215 DK401 H-2331 R138	44.5 44.1 43.8 43.8 43.3	35.8	34.8	16.9 17.7 16.5 20.3 17.7			7.5 7.8 7.2 8.9 7.7	7.3	7.2
PIONEER GARST GREAT LAKES GREAT LAKES TERRA	3779 8777 GL468 GL496 TR1020	43.0 42.7 42.7	34.6	33.8	17.9 18.2 18.7 21.9 18.0	21.0  20.4	22.5	7.7 7.8 8.0 9.3 7.6	7.0	7.4
CROW'S PIONEER GREAT LAKES PIONEER COUNTRYMARK	179 3573 GL509 X9310 C502X	41.7 40.8 39.9 39.4 38.0	33.2	32.2	19.5 19.8 21.7 21.6 20.3	21,7	22.6	8.1 8.1 8.6 8.6 7.7	7.0	7.1
AVERAGE		43.9	36.5	35.3	18.7	20.8	21.2	8.2	7.4	7.3
RANGE	========	38.0 TO 49.7	TO	32.2 TO	14.5 TO 21.9	18.3 TO 22.8	18.6 TO 22.6	7.2 TO 9.3	6.8 TO 8.0	6.6 TO

QUALITY ANALYSES
All analyses were determined by wet-chemical methods

HYBRID		DMD%	FD%	NDF%	CP%
(BRAND-VARIE	TY)	AVG	AVG	AVG	AVG
COUNTRYMARK	C323X	77.2	54.1	49.6	6.38
PICKSEED	5545	77.1	48.6	44.5	6.41
GREAT LAKES	GL450	78.3	51.3	44.6	6.59
BLANEY	B405	78.6	52.2	44.8	-6.71
PICKSEED	5665	74.3	46.3	47.9	7.24
PIONEER	3751	75.6	51.6	50.5	7.02
COUNTRYMARK	C432X	78.5	52.5	45.2	6.80
PIONEER	X0215	77.9	50.8	44.9	6.39
GREAT LAKES	GL468	75.5	47.7	46.8	6.26
GREAT LAKES	GL496	75.4	49.0	48.3	6.96
TERRA	TR1020	77.2	51.7	47.1	6.57
PIONEER	3573	76.8	49.9	46.4	6.54
GREAT LAKES	GL509	80.7	55.2	43.1	7.42
PIONEER	X9310	72.5	41.1	46.6	6.65
COUNTRYMARK	C502X	78.4	51.6	44.7	7.10

		DRY MA	ATTER		GREE	N WEIGH	PER	DRY WE	IGHT	
HYBRID (BRAND-VARIETY		1991	YR	YR	1991		yr	1991	YR	YR
CROW'S RENK AMCORN GREAT LAKES CARGILL	380 R680 PSX7450 GL569 SX269	50.4 49.5	37.8 35.3	33.6	16. 13. 19. 17. 18.	9 21.8 3 7 25.5 2 6	26.1	8.5 6.6 9.6 8.1 8.7	7.6	8.2
GOLDEN HARVEST TERRA GREAT LAKES CARGILL PAYCO	EX545 TR1060 GL579 4327 872	45.6 45.6 45.3 45.1 45.0	36.9		18. 19. 17. 16. 18.	2 0 5 22.2 2	22.5	8.2 8.7 7.9 7.3 8.4		7.5
SUPER CROST PIONEER PIONEER GREAT LAKES PROVICO	2989 3527 3429 GL586 PRO880	44.0	33.8	31.8	17. 21. 20. 19. 20.	8 25.7 7 25.1 8	25.5	7.7 9.6 9.1 8.3 8.6	8.3 7.9 7.1	7.8
RENK PROVICO RENK GREAT LAKES COUNTRYMARK	RK76 PRO900 RK721 GL583 C565X	42.1	31.9	30.3	21. 20. 20. 23. 19.	7 6 24.7 4	28.1 24.2	8.9 8.7 8.7 9.7 7.7		6.9
GARST TERRA GREAT LAKES PROVICO TERRA	8513 TR1120 GL577 PRO970 TR59	40.1 39.7 39.4 38.8 36.2		28.5	21. 21. 18. 19. 23.	9 4 0	28.3	8.5 8.7 7.2 7.4 8.6	  8.1	7.9
COUNTRYMARK	C682X	33.5			23.	2		7.7		
AVERAGE		43.2	33.7	31.4	19.	5 24.7	25.8	8.4	7.8	7.7

QUALITY ANALYSES
All analyses were determined by wet-chemical methods

HYBRID (BRAND-VARIE	TY)	DMD% AVG	FD% AVG	NDF% AVG	CP% AVG
AMCORN	PSX7450	75.4	46.0	45.6	7.14
GREAT LAKES	GL569	80.0	53.4	42.9	6.55
TERRA	TR1060	78.3	47.4	41.4	6.39
GREAT LAKES	GL579	80.5	53.1	41.7	7.22
PIONEER	3527	75.7	45.8	44.9	6.55
GREAT LAKES	GL586	79.3	48.9	40.6	7.29
GREAT LAKES	GL583	78.2	54.2	47.6	6.96
COUNTRYMARK	C565X	77.4	49.1	44.4	7.56
TERRA	TR1120	79.0	51.3	43.2	6.89
GREAT LAKES	GL577	78.0	48.3	42.5	7.79
TERRA	TR59	76.5	50.8	47.8	6.50
COUNTRYMARK	C682X	78.7	53.2	45.6	7.43

	1991	1990	1989
PLANTED	May 15	May 14	May 10
HARVESTED	September 10,18	September 20	September 18
SOIL TYPE	Kilmanagh Loam	Kilmanagh Loam	Kilmanagh Loam
PREVIOUS CROP	Corn '	Corn	Corn
POPULATION	28,000	24,800	21,200
ROW WIDTH	30"	30"	30"
FERTILIZER	160-141-6	163-57-98	193-49-97
SOIL TEST: PH	6.9	7.6	7.8
P	98 (high)	140 (very high)	104 (very high)
K	384 (very high)	187 (medium)	172 (medium)

FARM COOPERATOR: William McCrea, Bad Axe
MSU COOPERATORS: Dr. Michael Allen and David Main, Animal Science Dept
COUNTY EXTENSION DIRECTOR: Robert Johnson, Bad Axe
EXTENSION AGRICULTURAL AGENT: James LeCureux, Bad Axe

## TABLE 19 NORTHERN MICHIGAN ZONE 4 MISSAUKEE COUNTY TRIAL - SILAGE ONE, TWO, THREE YEAR AVERAGES-1991, 1990 \*\*, 1989

		DRY MA	TTER	GREEN	TONS P	ER ACRE DRY WE	IGHT	
HYBRID (BRAND-VARIETY	)	1991	YR	1991	YR YR	1991	YR YR	
PICKSEED PROVICO GREAT LAKES CARGILL PROVICO	2855 PRO520X GL350 2927 PRO500X	43.9 43.5 43.1 42.5 42.1	39.5   	14.5 13.6 15.5 18.5 13.3	13.9   	6.4 5.9 6.7 7.9 5.6	5.5   	
PROVICO GREAT LAKES COUNTRYMARK AMCORN COUNTRYMARK	PRO540X GL438 C363X PSX3333 C432X	41.5 41.3 40.2 40.1 39.6	36.2	16.6 19.0 17.9 17.9 18.9	16.5	6.9 7.8 7.2 7.2 7.5	6.0	
GREAT LAKES GOLDEN HARVEST PROVICO GOLDEN HARVEST COUNTRYMARK	GL446 H-2349 PRO510X H-2331 C565X	39.5 39.5 37.8 37.8 36.6		16.2 18.8 10.8 19.5 22.6	Ξ.	6.4 7.4 4.1 7.4 8.3	=	
PROVICO COUNTRYMARK COUNTRYMARK	PRO630X C502X C682X	36.1 36.0 30.5	=	19.0 21.3 26.7	Ξ	6.9 7.7 8.1	==	
AVERAGE		39.5	37.9	17.8	15.2	7.0	5.8	
RANGE		30.5 TO 43.9	36.2 TO	10.8 TO 26.7	13.9 TO 16.5	4.1 TO 8.3	5.5 TO 6.0	No. of the last

HYBRID (BRAND-VARIETY)		DMD% AVG	FD% AVG	NDF% AVG	CP% AVG
GREAT LAKES	GL350	74.5	41.5	43.6	6.39
GREAT LAKES	GL438	75.0	45.5	45.9	6.28
COUNTRYMARK	C363X	75.8	46.9	45.5	6.43
AMCORN	PSX3333	74.8	41.0	42.7	6.32
COUNTRYMARK	C432X	77.6	48.3	43.3	6.56
GREAT LAKES	GL446	77.2	47.5	43.5	6.56
COUNTRYMARK	C565X	78.5	47.1	40.6	5.91
COUNTRYMARK	C502X	79.0	52.0	43.6	6.46
COUNTRYMARK	C682X	75.1	46.3	46.4	6.14

QUALITY ANALYSES

1991 1990 \*\* PLANTED May 11 No trial HARVESTED September 18 SOIL TYPE Nester Sandy Loam PREVIOUS CROP Corn POPULATION 24,500 ROW WIDTH 30" 100-46-46 FERTILIZER SOIL TEST: pH 6.3 18 (very low) 216 (high)

1989 May 22 September 29 Marlette Sandy Loam Alfalfa Sod 20,800 30" 90-56-235 5.8 80 (high) 524 (very high)

FARM COOPERATORS: Doug Nielsen and George McGloughlin, Lake City Experiment Station MSU COOPERATORS: Dr. Michael Allen and David Main, Animal Science Dept. COUNTY EXTENSION DIRECTOR: Carl Stephens, Lake City

Cargill 5157 (9,10,11,12)

Cargill 5327 (5,6,7,8)

Index for 311 hybrids from 38 seed companies entered in 1595 county tests in the 1991 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. (\*) Asterisk signifies entries entered in the silage In-Vitro digestibility test for Quality Analyses.

vitro digestibility test for Quality Analyses.				
Amcorn Hybrids, Inc.				
Amcorn PSX 3333 (13,14,15,16,19*)	Amcorn PSX 7450 (1,2,3,4,5,6,7,8,			
Amcorn PSX 4343 (13,14,15,16)	9,10,11,12,18*)			
Amcorn PSX 5555 (13,14,15,16)	Amcorn PSX 8181 (5,6,7,8)			
Amcorn PSX 5757 (1,2,3,4,5,6,7,8,9,	Amcorn PSX 9009 (1,2,3,4,5,6,7,8)			
10,11,12)	Amcorn PSX 9292 (1,2,3,4,5,6,7,8,17*)			
The Andersons	DOX 0.00 (E.C. 7.0)			
Andersons PSX 250 (9,10,11,12)	Andersons PSX 360 (5,6,7,8)			
Andersons PSX 290 (9,10,11,12)	Andersons PSX 370 (1,2,3,4,5,6,7,8)			
Andersons PSX 345 (5,6,7,8)	Andersons PSX 380 (1,2,3,4)			
Asgrow Seed Co.				
Asgrow RX 406 (9,10,11,12)	Asgrow RX 626 (5,6,7,8,9,10,11,12)			
Asgrow RX 409 (9,10,11,12)	Asgrow RX 706 (1,2,3,4,5,6,7,8)			
Asgrow RX 469 (9,10,11,12)	Asgrow RX 745 (1,2,3,4)			
Asgrow RX 578 (1,2,3,4,5,6,7,8,				
9,10,11,12)				
Beck's Superior Hybrids				
Beck's 54XA (1,2,3,4)	Beck's 63X (1,2,3,4)			
Beck's 57X (1,2,3,4)	Beck's 66X (1,2,3,4)			
Beck's 58 (1,2,3,4)	Beck's 74X (1,2,3,4)			
Deck 8 36 (1,2,3,4)	DOCK 3 7 11 (1,2,3,1)			
Richard Blaney Seeds, Inc.				
Blaney B106 (13,14,15,16)	Blaney B603 (1,2,3,4,5,6,7,8,9,10,11,12)			
Blaney B305 (13,14,15,16)	Blaney B607 wx (9,10,11,12,17*)			
Blaney B405 (5,6,7,8,9,10,11,12,18*)	Blaney B608 (1,2,3,4,5,6,7,8)			
Blaney B505 (5,6,7,8,9,10,11,12)	Blaney B609 (1,2,3,4,5,6,7,8)			
Blaney B506 (1,2,3,4)	Blaney B702 wx (1,2,3,4)			
Callahan Enterprises, Inc.				
Callahan C725 (9,10,11,12)	Callahan 24448X (1,2,3,4,5,6,7,8,			
Callahan C729 (9,10,11,12)	9,10,11,12)			
Callahan C743 (9,10,11,12)	Callahan 24459X (1,2,3,4)			
Callahan C748 (1,2,3,4,5,6,7,8,9,10,11,12)	Callahan 27128X (5,6,7,8,9,10,11,12)			
Callahan C759 (1,2,3,4,5,6,7,8,17*)	Callahan 27148X (1,2,3,4)			
Callahan C764 (1,2,3,4,5,6,7,8,17)	Callahan 27188X (1,2,3,4,5,6,7,8,			
Callahan C771 (1,2,3,4,17*)	9,10,11,12)			
	Callahan 27199X (1,2,3,4,5,6,7,8,			
	9,10,11,12)			
Cargill Hybrid Seeds				
Cargill SX269 (1,2,3,4,5,6,7,8,17,18)	Cargill 6227 (1,2,3,4,5,6,7,8)			
Cargill 2437 (9,10,11,12,13,14,15,16)	Cargill 7697 (1,2,3,4)			
Cargill 2927 (9,10,11,12,13,14,15,16)	Cargill 7877 (1,2,3,4)			
Cargill 3427 (5,6,7,8,9,10,11,12,13,14,	Cargill 7973 (1,2,3,4)			
15,16)	Cargill 7997 (1,2,3,4)			
Cargill 4327 (5,6,7,8,9,10,11,12,18)	Cargill 8027 (1,2,3,4)			
Cargill 4327 (3,0,7,0,9,10,11,12,10)	Cargill 37012 (0 10 11 12)			

Countrymark Co-op, Inc. Countrymark C323X (9,10,11,12,18\*) Countrymark C565X (1,2,3,4,5,6,7,8, Countrymark C363X (19\*) 9,10,11,12,17\*,18\*,19\*) Countrymark C432X (5.6.7.8.9.10.11.12. Countrymark C660X (1,2,3,4) 17\*.18\*.19\*) Countrymark C682X (1,2,3,4,5,6,7,8, Countrymark C502X (1,2,3,4,5,6,7,8, 9,10,11,12,17\*,18\*,19\*) 9,10,11,12,17\*,18\*,19\*) Crow's Hybrid Corn Company Crow's SL32 (17\*) Crow's 237 (1,2,3,4,5,6,7,8) Crow's 167 (9,10,11,12,13,14,15,16) Crow's 380 (9,10,11,12,17\*,18) Crow's 179 (1,2,3,4,5,6,7,8,9,10,11, Crow's 414 (1,2,3,4,9,10,11,12) 12,13,14,15,16,17\*,18) Crow's 449 (1,2,3,4,5,6,7,8) Crow's 210 (1,2,3,4,5,6,7,8) Crow's 488 (1,2,3,4) Crow's 227 (1,2,3,4,5,6,7,8,9,10,11,12) Crow's 498 (1,2,3,4,5,6,7,8) Dairyland Seed Company, Inc. Dairyland DX-1014 (1,2,3,4) Dairyland DX-1190 (13,14,15,16) Dairyland DX-1015 (1,2,3,4) Dairyland DX-1192 (13,14,15,16) Dairyland DX-1100 (5,6,7,8,9,10,11,12, Dairyland Stealth-1198 (5,6,7,8,9,10,11,12) 13,14,15,16) Dairyland Stealth-1201 (5,6,7,8,9,10,11,12) Dairyland DX-1103 (5,6,7,8) Dairyland Stealth-1203 (5,6,7,8) Dairyland DX-1107 (5,6,7,8) Dairyland Stealth-1206 (1,2,3,4,5,6,7,8) Dairyland DX-1110 (1,2,3,4,5,6,7,8) Dairyland Stealth-1112 (1,2,3,4,5,6,7,8) Dairyland DX-1117 (1,2,3,4) **Dekalb Plant Genetics** Dekalb DK352 (13,14,15,16) Dekalb DK535 (1,2,3,4,5,6,7,8) Dekalb DK401 (9,10,11,12,18) Dekalb DK550 (1,2,3,4,17) Dekalb DK485 (5,6,7,8,9,10,11,12,18) Dekalb DK636 (1,2,3,4,17) Dekalb DK524 (1,2,3,4,5,6,7,8,17) **UAP Seed Company** Dyna-Gro 5351 (5,6,7,8,9,10,11,12) UAPX 15011 (9,10,11,12,13,14,15,16) Dyna-Gro 5410 (1,2,3,4,5,6,7,8) UAPX 15012 (9,10,11,12) Dyna-Gro 5470 (1,2,3,4,5,6,7,8) UAPX 15013 (1,2,3,4,5,6,7,8,9,10,11,12) UAPX 15010 (13,14,15,16) UAPX 15014 (1,2,3,4,5,6,7,8) CIBA-GEIGY Seed Division Funk's G Brand 4120 (9,10,11,12) Funk's G Brand 4472 (1,2,3,4) Funk's G Brand 4282 (exp. 2078X) (5,6,7, Funk's G Brand 4140 (9,10,11,12) Funk's G Brand 4160 (9,10,11,12) 8,9,10,11,12) Funk's G Brand 4372 (exp. 3112X) (1,2,3, Funk's G Brand 4260 (5,6,7,8,9,10,11,12) Funk's G Brand 4299 (5,6,7,8,9,10,11,12) Funk's G Brand 4432 (exp. 4145X) (1,2,3, Funk's G Brand 4385 (1,2,3,4,5,6,7,8) Funk's G Brand 4393 (1,2,3,4,5,6,7,8) Garst Seed Company Garst 8513 (17.18) Garst 8777 (17,18) Gen-Tech Farm Seed, Inc. Gen-tech 1070 (1,2,3,4) Gen-tech 1101 (1,2,3,4) Golden Acres Seed Company Golden Acres GA4550 (1,2,3,4) Golden Acres GA7141 (1,2,3,4)

Golden Acres GA6839 (1,2,3,4)

Cargill 37012 (9,10,11,12)

Golden Acres GA7149 (1.2.3.4)

Sommers Bros. Seed Company Golden Harvest EX447 (1.2.3.4) Golden Harvest EX545 (1,2,3,4,5,6,7,8, 9,10,11,12,17,18) Golden Harvest H-2331 (1,2,3,4,5,6,7,8, 9,10,11,12,17,18,19) Golden Harvest H-2349 (1,2,3,4,5,6,7,8, 9,10,11,12,17,18,19

Great Lakes GL226 (13,14,15,16)

Great Lakes GL306 (13,14,15,16)

Great Lakes GL450 (1,2,3,4,5,6,7,8,9,10,

Great Lakes GL459 (5,6,7,8,9,10,11,12)

Great Lakes GL482 (5.6.7.8.9.10.11.12)

Great Lakes GL496 (5,6,7,8,9,10,11,

Great Lakes GL468 (1,2,3,4,5,6,7,8,9,10,

Golden Harvest H-2390 (5,6,7,8,9,10, 11,12) Golden Harvest H-2465 (1,2,3,4,5,6,7,8, 9,10,11,12) Golden Harvest H-2485 (1,2,3,4,5,6,7,8, 9,10,11,12) Golden Harvest H-2532 (1,2,3,4,17) Golden Harvest H-2572 (17)

Great Lakes GL350 (13,14,15,16,19\*) Great Lakes GL438 (9,10,11,12,13,14, Great Lakes GL446 (5,6,7,8,9,10,11,12,

Great Lakes GL499 (1,2,3,4,5,6,7,8, 9,10,11,12) Great Lakes GL509 (17,18\*) Great Lakes GL536 (1,2,3,4,5,6,7,8, 9,10,11,12) Great Lakes GL569 (5,6,7,8,9,10,11,12, 17.18\*)Great Lakes GL577 (1,2,3,4,5,6,7,8, 9,10,11,12,17,18\*) Great Lakes GL579 (5,6,7,8,9,10,11,12, 17,18\*) Great Lakes GL583 (1,2,3,4,5,6,7,8, 17,18\*) Great Lakes GL586 (1,2,3,4,17,18\*)

Gries Seed Farms, Inc. Gries GSF-635 (1,2,3,4,5,6,7,8)

Gries GSF-6110 (1,2,3,4,5,6,7,8)

Fred Gutwein & Sons, Inc.

Great Lakes Hybrids, Inc.

15.16.19\*)

11,12,18\*)

12,17,18\*)

13,14,15,16,19\*)

11,12,13,14,15,16,18\*)

Gutwein 2100 (5,6,7,8) Gutwein 2191 (5.6.7.8) Gutwein 2390 (1,2,3,4,5,6,7,8)

Gries GSF-4103 (1,2,3,4,5,6,7,8)

Gutwein 2484 (1,2,3,4) Gutwein 2650 (1,2,3,4)

Jacques Seed Company

Jacques 2750 (13,14,15,16) Jacques 3220 (13,14,15,16) Jacques 4120 (9,10,11,12,13,14,15,16)

Jacques 4770 (1,2,3,4,5,6,7,8,9,10,11,12) Jacques 5170 (5,6,7,8) Jacques 7970 (1,2,3,4)

Jung Farms, Inc.

Jung 2365 (13,14,15,16) Jung 2378 (13,14,15,16) Jung 2444 (13,14,15,16) Jung 2496 (9,10,11,12,13,14,15,16) Jung 2514 (9,10,11,12) Jung 2696 (9,10,11,12)

King Agro, Inc.

King Agro K402 (5,6,7,8,9,10,11,12) King Agro K416 (5,6,7,8,9,10,11,12) King Agro K451 (5,6,7,8,9,10,11,12) King Agro K647 (1,2,3,4)

King Agro K2204 (9,10,11,12) King Agro K5574 (5,6,7,8,9,10,11,12) King Agro GG955 (9,10,11,12) King Agro GG1008A (1,2,3,4,5,6,7,8)

Northrup King Company

Northrup King N2001 (13,14,15,16) Northrup King N3624 (5,6,7,8,9,10,11,12) Northrup King N3808 (5,6,7,8,9,10,11,12) Northrup King N4242 (5,6,7,8,9,10,11,12) Northrup King N4428 (5,6,7,8) Northrup King N4545 (5,6,7,8)

Northrup King N5728 (5,6,7,8) Northrup King N6330 (1,2,3,4) Northrup King X100 (13,14,15,16) Northrup King X209 (13,14,15,16) Northrup King X279 (13,14,15,16) Northrup King X728 (1,2,3,4)

Rupp Seeds, Inc.

Stine Seeds

Garst Seed Company

Terra International, Inc.

Terra TR59 (18\*)

Terra TR940 (9,10,11,12)

Rupp XR1505 (5.6.7.8.9.10.11.12) Rupp XR1639 (5,6,7,8,9,10,11,12) Rupp XR1739 (1,2,3,4,5,6,7,8) Rupp XR1774 (1,2,3,4,5,6,7,8) Rupp XR1808 (1,2,3,4)

Stine 860 (9,10,11,12,13,14,15,16)

SuperCrost 1548 (13,14,15,16)

SuperCrost 1594 (13,14,15,16)

Stine 900 (5,6,7,8,9,10,11,12,13,14,15,16)

Stine 1015 (1,2,3,4,5,6,7,8,9,10,11,12)

SuperCrost 1900 (5,6,7,8,9,10,11,12,18)

SuperCrost 1999 (5,6,7,8,9,10,11,12)

SuperCrost 2000 (5,6,7,8,9,10,11,12)

Terra TR1010 (5.6.7.8.9.10.11.12)

Top Farm TFsx1097A (9,10,11,12)

Top Farm TFsx1101 (5,6,7,8,9,10,11,12)

Top Farm TFsx1104 (1,2,3,4,5,6,7,8)

Terra TR1040 (1,2,3,4,5,6,7,8)

Terra TR1020 (5,6,7,8,9,10,11,12,18\*)

Rupp Exp. 1-190 (1,2,3,4) Rupp Exp. 1-191 (9,10,11,12) Rupp Exp. 1-198 (13,14,15,16)

Rupp XR1884 (1,2,3,4)

Wolf River Valley Seeds

Top Farm Hybrids

Wolf River Valley 9080 (15)

Michigan Hybrid Seed Company, Inc.

Wolverine W158 (5,6,7,8)

Wolverine W133 (9,10,11,12) Wolverine W156 (5,6,7,8,9,10,11,12)

Stine 1021 (1,2,3,4,5,6,7,8,9,10,11,12) Stine 1077 (1,2,3,4,5,6,7,8,9,10,11,12) Stine 1116 (1,2,3,4,5,6,7,8) Stine 1128 (1.2.3.4)

SuperCrost 2989 (1,2,3,4,5,6,7,8, 9,10,11,12,17,18) SuperCrost 4366 (1,2,3,4) SuperCrost 5460 (1,2,3,4)

Terra TR1060 (1,2,3,4,5,6,7,8,18\*) Terra TR1090 (1,2,3,4,5,6,7,8) Terra TR1120 (1,2,3,4,18\*) Terra TR1125 (1,2,3,4) Terra Exp. 190 (9,10,11,12)

Top Farm TFsx1107 (1.2.3.4.5.6.7.8) Top Farm TFsx1195A (9,10,11,12)

Wolf River Valley 9085 (15)

Wolverine W167 (1,2,3,4,5,6,7,8, 9.10.11.12)

Roy W. Parker & Son. Inc. Parker 63 (1,2,3,4) Parker 350 (1,2,3,4) Payco Seed Company Payco 239 (13,14,15,16) Payco 811 (1,2,3,4) Payco 248 (13,14,15,16) Payco 829 (1,2,3,4) Payco 872 (5,6,7,8,18) Payco 648 (5,6,7,8,9,10,11,12) Payco 687 (5,6,7,8,9,10,11,12) Payco 900 (17) Payco 711 (5,6,7,8) Pickseed Canada, Inc. Pickseed 2600 (13,14,15,16) Pickseed 5665 (9,10,11,12,13,14,15, Pickseed 2700 (13,14,15,16) 16,18\*) Pickseed 2855 (13,14,15,16,19\*) Pickseed 8833 (5,6,7,8) Pickseed 83-280 (5,6,7,8,9,10,11,12) Pickseed 5545 (9,10,11,12,13,14, 15,16,18\*) Pickseed 83-282 (5,6,7,8,9,10,11,12) Pioneer Hi-Bred International, Inc. Pioneer 3241 (1,2,3,4) Pioneer 3733 (1,2,3,4,5,6,7,8,9,10,11, Pioneer 3293 (1,2,3,4) 12,13,14,15,16) Pioneer 3357 (1,2,3,4,5,6,7,8,17\*) Pioneer 3751 (1,2,3,4,5,6,7,8,9,10,11, Pioneer 3379 (1,2,3,4) 12,13,14,15,16,17\*,18\*) Pioneer 3394 (1,2,3,4,5,6,7,8,17\*) Pioneer 3779 (13,14,15,16,18) Pioneer 3417 (1,2,3,4) Pioneer 3845 (15) Pioneer 3429 (17,18) Pioneer 3897 (13,14,15,16) Pioneer 3475 (1,2,3,4,5,6,7,8,9,10,11,12) Pioneer 3921 (13,14,15,16) Pioneer 3527 (1,2,3,4,5,6,7,8, Pioneer 3963 (15) 9,10,11,12,17\*,18\*) Pioneer X0215 (1,2,3,4,5,6,7,8,9,10,11, Pioneer 3573 (1,2,3,4,5,6,7,8, 12,13,14,15,16,17\*,18\*) Pioneer X9310 (1,2,3,4,5,6,7,8,9,10,11, 9,10,11,12,17\*,18\*) 12,13,14,15,16,17\*,18\*) Prairie Stream Farms, Inc. Prairie Stream SX420 (1,2,3,4) Prairie Stream SX475 (1,2,3,4) Pro-Seed Pro-Seed XS1002 (5,6,7,8) Pro-Seed XS1062 (1,2,3,4) Pro-Seed XS1043 (1,2,3,4,5,6,7,8) Pro-Seed XS1091 (1,2,3,4) Provico Seeds Provico Pro 751 (9,10,11,12) Provico Pro 970 (1,2,3,4,17,18) Provico Pro 790 (5,6,7,8,9,10,11,12) Provico Pro 500X (13,14,15,16,19) Provico Pro 811 (1,2,3,4,5,6,7,8, Provico Pro 510X (13,14,15,16,19) 9,10,11,12) Provico Pro 520X (13,14,15,16,19) Provico Pro 880 (1,2,3,4,5,6,7,8, Provico Pro 540X (9,10,11,12,13,14,15, 16,19) 9.10,11,12,17\*,18) Provico Pro 900 (1,2,3,4,5,6,7,8,17\*,18) Provico Pro 630X (5,6,7,8,9,10,11,12,19) Provico Pro 920 (1,2,3,4,5,6,7,8) Provico Pro 760X (5,6,7,8,9,10,11,12) Renk Seed Company Renk RK76 (1,2,3,4,17,18) Renk RK680 (17,18) Renk RK138 (18) Renk RK702 (1,2,3,4,5,6,7,8,9,10,11,12) Renk RK430 (9,10,11,12) Renk RK721 (1,2,3,4,5,6,7,8, Renk RK505 (9,10,11,12) 9,10,11,12,17,18) Renk RK803 (1,2,3,4) Renk RK534 (9,10,11,12) Renk RK602 (5,6,7,8,9,10,11,12,18) Renk RK873 (1,2,3,4)

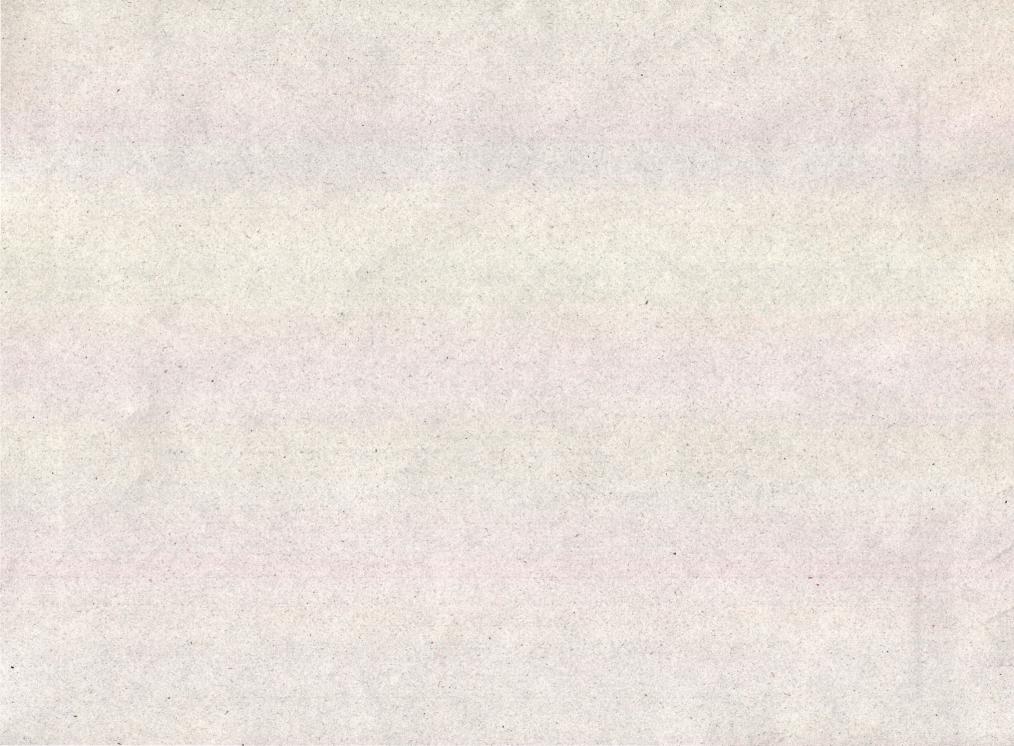
Renk RK646 (5,6,7,8,9,10,11,12)

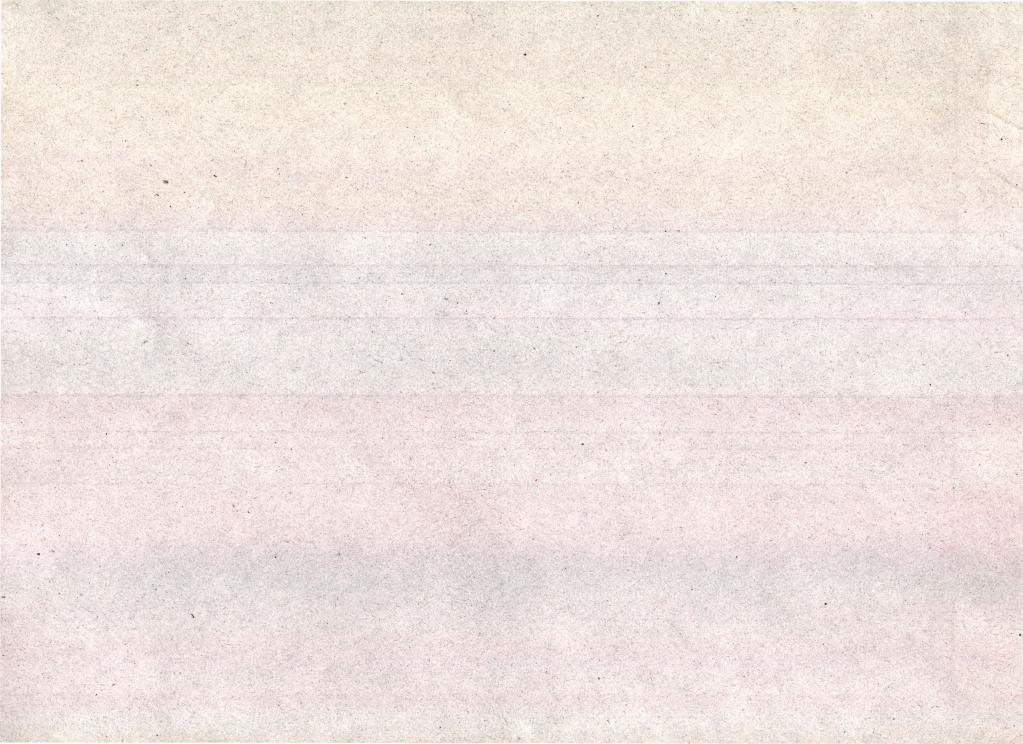
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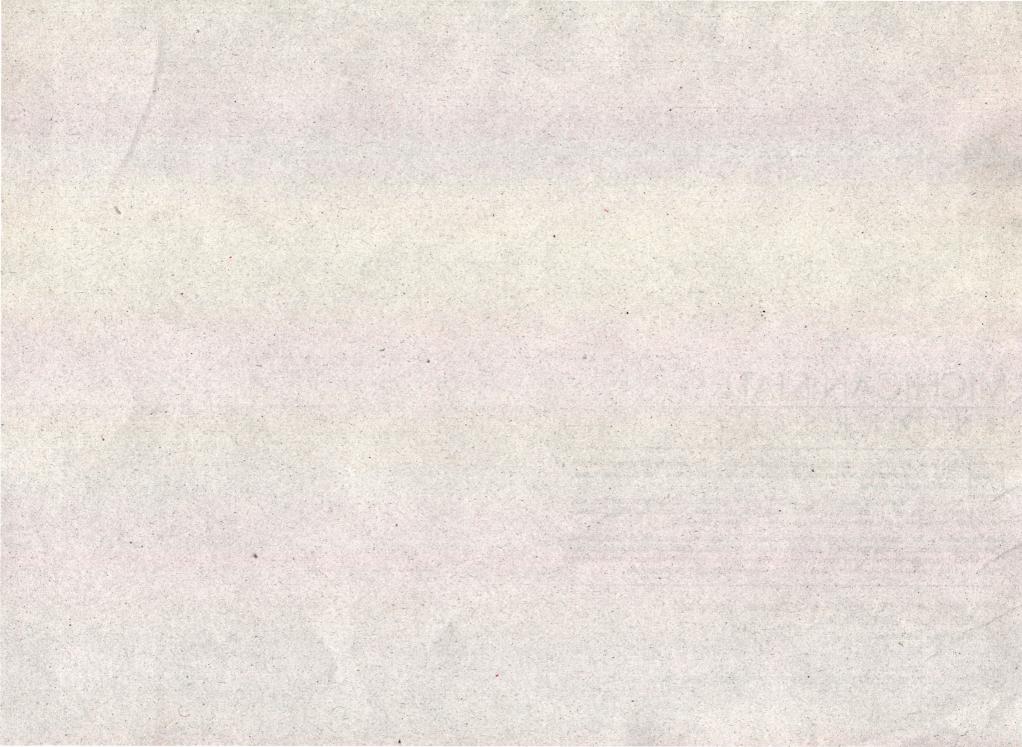
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### COMPANIES WITH HYBRIDS ENTERED IN 1991 TRIALS

BRAND	COMPANY NAME AND ADDRESS	BRAND	COMPANY NAME AND ADDRESS
AMCORN	Amcorn Hybrids, Inc., 1093 129th Avenue, Box 6	JACQUES	Jacques Seed Company, 720 St. Croix Street
TO STATE OF THE ST	Bradley, MI 49311		Prescott, WI 54021
ANDERSONS	The Andersons, P.O. Box 119	JUNG	Jung Farms, Inc., 335 South High Street
	Maumee, OH 43537		Randolph, WI 53957
ASGROW	Asgrow Seed Company, 7000 Portage Road	KING AGRO	King Agro, Inc., 8687 East US 223, P.O. Box 69
CATHOLOGICAL CAMP COMPACT CONTRACTOR	Kalamazoo, MI 49001		Blissfield, MI 49228
BECK'S	Beck's Superior Hybrids, 6767 East 276th Street	NORTHRUP KING	Northrup King Company, P. O. Box 959
DV 4.5000	Atlanta, IN 46031	PARKER	Minneapolis, MN 55440
BLANEY	Richard Blaney Seeds, Inc., 5292 East Lacy Road	PARKER	Roy W. Parker & Son, Inc., P. O. Box 125
CATTATIAN	Madison, WI 53711	PAYCO	Kimmell, IN 46760 Payco Seed Company, P.O. Box 458
CALLAHAN	Callahan Enterprises, Inc., 1122 East 169th Street Westfield, IN 46074	PATCO	Grand Ledge, MI 48837
CARGILL	Cargill Hybrid Seeds, Box 5645	PICKSEED	Pickseed Canada, Inc., Box 126
CARGILL	Minneapolis, MN 55440-5645	FICKSEED	Richmond Hill, Ontario, Canada L4C 4X9
COUNTRYMARK	Countrymark Co-op, Inc., 4565 Columbus Pike, Box 1206	PIONEER	Pioneer Hi-Bred International, Inc., 1000 West Jefferson Street
COUNTRIMARK	Delaware, OH 43015	TIONELK	Tipton, IN 46072
CROW'S	Crow's Hybrid Corn Company, Box 306	PRAIRIE STREAM	Prairie Stream Farms, Inc., Route 3, Box 333
	Milford, IL 60953		Frankfort, IN 46041
DAIRYLAND	Dairyland Seed Company, Inc., P. O. Box 958, 3570 Hwy. H	PRO-SEEDS	Pro-Seed, 236 Sugar Street
	West Bend, WI 53095-0958		Blissfield, MI 49228
DEKALB	Dekalb Plant Genetics, 3100 Sycamore Road	PROVICO	Provico Seeds, Box 579, 104 South Sycamore Street
	Dekalb, IL 60115		Botkins, OH 45306
DYNA-GRO	UAP Seed Company, 4415 66th Street, Suite 111	RENK	Renk Seed Company, 6700 Wilburn Road
	Lubbock, TX 79414		Sun Prairie, WI 53590
FUNK'S G-BRAND	CIBA-GEIGY Seed Division, 12275 South Sherman Lake Drive	RUPP	Rupp Seeds, Inc., 17919 County Road B
	Augusta, MI 49012		Wauseon, OH 43567
GARST	Garst Seed Company, P. O. Box 67	STINE	Stine Seeds, RR 3 Box 204
	Kentland, IN 47951		Adel, IA 50003
GEN-TECH	Gen-tech Farm Seed, Inc., 15740 Old 31	SUPERCROST	Garst Seed Company, P. O. Box 67, 601 Funk Parkway
五世的特殊的特殊的	Argos, IN 46501		Kentland, IN 47951
GOLDEN ACRES	Golden Acres Seed Company, 888 Parsons Road, P.O. Box 226	TERRA	Terra International, Terra Centre, 600 Fourth Street
	Crotda, OH 43013		Sioux City, IA 51101
GOLDEN HARVEST	Sommer Bros. Seed Company, P.O. Box 248	TOP FARM	Top Farm Hybrids, Inc., P. O. Box 850
<b>企业的</b>	Pekin, IL 61554		Lubbock, TX 79414
GREAT LAKES	Great Lakes Hybrids, Inc., 9915 West M-21	UAPX	UAP Seed Company, 4415 66th Street, Suite 111
CDIES	Ovid, MI 48866	WOLE BIVED VALLEY	Lubbock, TX 79414
GRIES	Gries Seed Farms, Inc., 2348 North Fifth Street	WOLF RIVER VALLEY	
GUTWEIN	Fremont, OH 43420 Fred Gutwein & Sons, Route 1, Box 40	WOLVERINE	White Lake, WI 54491  Mishing Hybrid Sand Company, Inc. 206 Park Street, P.O. Pay 34
GUIWEIN	Francesville, IN 47946	WOLVERINE	Michigan Hybrid Seed Company, Inc., 206 Park Street, P.O. Box 34 Mason, MI 48854







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