

# 1988 Michigan Soybean Performance Report

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This bulletin provides information on the performance of soybean varieties available in Michigan.

Comprehensive variety yield trials were conducted in Southeastern Michigan (Lenawee County), Southwestern Michigan (St. Joseph County), Far Southwestern Michigan (Berrien County), South Central Michigan (Ingham County), Central Michigan (Saginaw County), West Central Michigan (Montcalm) and East Central Michigan (Sanilac County). A smaller trial was conducted in Huron County.

## Testing Procedures

Commercial varieties voluntarily entered were obtained from seed companies. Public varieties were supplied by the Michigan Foundation Seed Association.

Cooperators, planting and harvest dates, fertilizer practices, previous crops, and soil management groups at the eight locations are listed in Table 1.

Maturity groups of all varieties tested are listed in Table 2. Seed of entries was planted in 4-row plots 20 feet long with a 20-inch row spacing, 1½ inches deep at 4.5 seeds per foot of row. Each plot was randomized in the trial and replicated 3 times. Fourteen feet of the center two rows were harvested for yield.

## Evaluating Characteristics

**YIELD**—Yield is expressed in bushels per acre at 13% moisture.

**MATURITY DATE**—Entries were considered mature when 95% of the pods had attained their final color and would crack under finger pressure. Additional field drying was required before the plants were ready to harvest. Dates were recorded by month and day, (Table 2) or as days relative to the check cultivar.

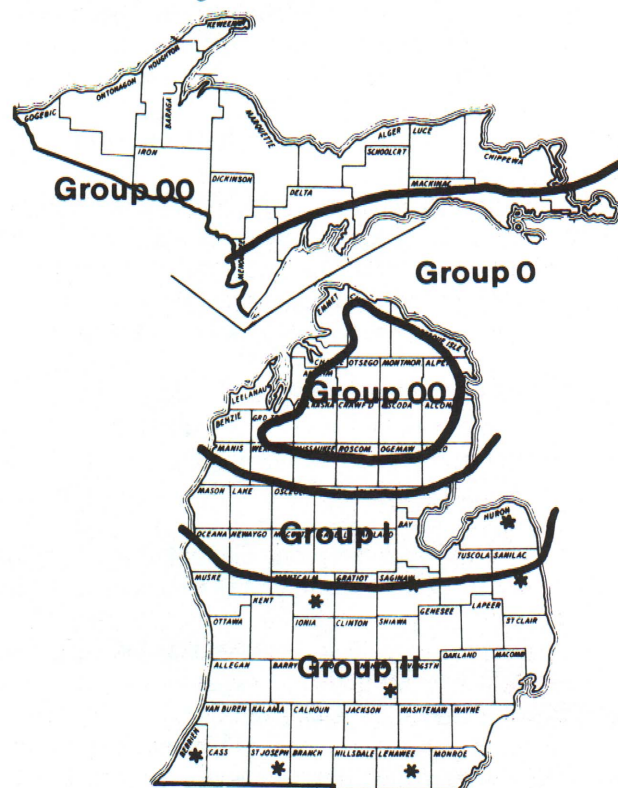
**HEIGHT**—Plant height, in inches, was measured at maturity from the soil surface to the tip of the main stem.

**LODGING**—Lodging scores reflect the erectness of the plants before harvest. Ratings are based on the following scale:

1. Almost all plants erect
2. All plants leaning slightly, or fewer than 25% of the plants down
3. All plants leaning moderately (45%), or 25% to 50% of the plants down
4. All plants leaning considerably, or 50% to 80% of the plants down
5. Almost all plants down

## Results

Tables 2-5 show results of 1988 soybean variety trials. Values given are the averages of all replications harvested at each location. Extremely warm and dry weather occurred in all areas from May 1 to early June. Saginaw was least affected by the drought, St. Joseph and Ingham Counties were irrigated sites.



Soybean Maturity Zones for Full-Season Varieties in Michigan, and Locations (\*) of Trials.



The LSD (least significant difference) value is useful when comparing two varieties in the same table. Two varieties with the same genetic potential for yield may have different yields due to variation in soil fertility, compaction, and other environmental factors. If the difference is less than the LSD value, the difference between the varieties may be due to chance or minor environmental differences. However, if the difference between two varieties is greater than the LSD, there is a 95%, or better, probability that the performance is actually different. The CV value is an indicator of the degree of precision for a particular test. The lower the CV value, the more discerning the test.

## Selecting a Variety

The primary consideration in selecting a variety is yield. When evaluating a variety, consider yield performance over several years, if available. Give preference to data obtained in the nearest variety trial. Use all trials in determining a variety's performance under various environmental conditions.

Considerations other than yield are important in selecting a variety, and in some cases result in choosing a variety with only moderate performance. It is especially important to select a variety with proper maturity. From past weather data, farmers can determine the percent probability of the first fall frost. A general rule of thumb is to choose a variety that will mature (see maturity date definition) before the average date for 25% chance of the first killing frost in the fall. Farmers growing soybeans for the first time may wish to contact neighbors to determine what varieties mature before frost in their area. When large acreages of soybeans are planted, varieties of different maturities provide staggered maturity dates for a longer harvest season.

The degree of lodging varies among varieties. Lodged plants in variety trials are manually picked up and threshed, thus yield losses from lodging are not reflected in the yields reported. Lodging ratings should be used to evaluate potential losses. Farmers who have experienced lodging in the past and have had harvest problems may select a more lodging-resistant variety. Alternately, a variety susceptible to lodging may be planted at a slightly lower population to increase standability. Evaluate lodging data over all locations to determine a variety's lodging characteristics.

Note seed size when selecting planting rates. Planting rates should be based on number of seeds per foot of row and not on pounds per acre.

Many diseases occur in soybean fields in Michigan. The diseases which contribute most significantly to yield reduction are seed and seedling diseases and those causing root and stem rots. Root rots of soybeans are generally recognized when plants turn yellow prematurely, wilt, or die. Less noticeable is the yield reduction that occurs when root rot destroys part of the root system, but causes no visible symptoms to above-ground parts. The fungi that cause root rots often survive in the soil for several years, even in the absence of a host plant. Once root rot fungi are established in a field, control is difficult, even with crop rotation.

The most important and widespread root disease is Phytophthora root rot. New varieties with resistance to several races of the fungus have been developed, but no variety is resistant to all races. Disease resistance characteristics of varieties to Phytophthora root rot, where known, are given in Table 2. Growers who have experienced losses due to this disease would increase their chances of success by using one of the multi-race resistant varieties.

Sclerotinia stem rot (white mold) is a problem in some fields, especially where white beans were grown in the past. Field tests in 1984 and 1985 indicated wide differences in disease among varieties (see 1986 Michigan Soybean Performance Report). Where problems with this disease are experienced, one of the varieties with lower disease ratings might be beneficial.

It often benefits growers to select a few good varieties for planting each year. Yield determination and careful field evaluation during the growing season will add to the grower's knowledge of varietal performance and allow better selection.

More information about variety selection and cultural practices can be found in Extension Bulletin E-1549, "Soybean Production in Michigan," and E-2080 "Producing Soybeans in Narrow Rows."

## Using Data

Table 2 presents multiple-environment averages from all tests in the Southern and Central Michigan regions since 1975. The column labeled n refers to the number of tests in which each variety was included. The column labeled DEV. refers to the difference (in bushels per acre) between the mean yield of the variety over n tests and the mean yield of all varieties in those tests. The maturity checks used for tests of Group I and Group II varieties were "Hodgson 78" (H78) and "Corsoy 79" (C79), respectively. A positive relative maturity value means that the variety matured later than the check and a negative value means that the variety matured earlier than the check. The value is the actual number of days in either direction.

Data presented in Tables 3 through 5 are from both regional and site-specific performance trials. Both 1988 yields and multiple-year average yields from all tests since 1975 are given. Maturity, height (in inches), and lodging scores are the 1988 regional averages. Maturity is expressed as + or - days when compared with the check variety. For 1988 yield data, starred(\*) entries designate yields not significantly different from the highest for that location. Multiple-environment and multiple-year averages comprised of a greater number of tests (greater n) should be considered more reliable.

The presentation of data for the entries tested does not suggest approval or endorsement of varieties by the authors or by those responsible for conducting the performance trials.

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**TABLE 1. 1988 Michigan State University Soybean Variety Test, site information.**

County	Lenawee	St. Joseph	Berrien	Ingham	Saginaw	Sanilac	Montcalm	Huron
<b>CES Director / Agent</b>	N.R. Bless G.A. Wuethrich	F.J. Henningsen M.J. Kaercher	J.E. Niebauer J. Davidhizar	M.M. Preston R. Plummer	J. Thews S.S. Poindexter	M. Nagelkirk	D. Smucker J. O'Donnell	R.A. Johnson J.P. LeCureux
<b>Cooperator</b>	David Woods	Ray Gentz	F. Leitz		C. Gosen	E. Fischer	R.W. Chase	J. Jurgess
<b>Address</b>	Woods Seed Farm 10992 Holloway Rd. Britton, MI	32315 Covey Rd. Colon, MI	5109 River Rd. Sodus, MI	MSU Campus East Lansing, MI	8735 Swan Creek Rd. Saginaw, MI	481 Boyne Rd. Sandusky, MI	Montcalm Research Farm, Entrican, MI	4300 Sand Beach Rd. Bad Axe, MI
<b>Soil Type</b>	Lenawee silty clay loam	Elston sandy loam	Thetford loamy sand	Capac loam	Pella silt loam and Kibbie fine sandy loam	Capac loam and silt loam and Parkhill loam	Montcalm and McBride loamy sands and sandy loams	Kilmanagh loam
<b>Soil Mgt Group</b>	1.5c	4a	4b	2.5b	2.5c-s and 2.5b-s	2.5b and 2.5c	4a and 3a-f	2.5c
<b>Previous Crop</b>	Sod	Com	Com	Com	Com	Navy beans	Com	Com
<b>Fertilizer</b>	500# 0-0-60	137# 9-21-30 with 0.2% B, 4% Mg, 2% Mn, 3% Zn	None	200# 6-24-24	200# 5-20-20	180# 7-18-38	None	200# 6-24-24
<b>Planting Date</b>	5/5/88	5/20/88	5/25/88	5/27/88	5/16/88	5/16/88	5/18/88	5/24/88
<b>Harvest Date</b>	10/6/88	10/13/88	10/31/88	10/29/88	10/14/88	10/27/88	10/20/88	11/1/88

**TABLE 2. Performance Summary for varieties entered in the Michigan trials in 1988. Phytophthora resistance designations denote the following: Type 1a resistant to Races 1, 2, and 10; Type 1b resistant to Races 1 and 3-9; Type 1c resistant to Races 1-3 and 6-10; Type 1k resistant to Races 1-10; Type 3 resistant to Races 1-5, 8, and 9; Type 6 resistant to Races 1-4 and 10.**

Brand / Entry	MG	Phyt. Res. Type	Yield (bu/A) with deviation from mean						Maturity Relative to Checks						Lodging Score	
			Southern			Central			Southern			Central			South.	Central
			Yield (n)	Dev.	Yield (n)	Dev.	Date	H78	C79	Date	H78	C79				
<b>Public</b>																
Ancor	II	Rps1a	43.8 (25)	-0.6	44.7 (25)	-0.1	9-27	11	5	10-6	12	5	3.1	2.9		
Beeson 80	II	Rps1c	36.7 (25)	-7.8	37.6 (27)	-6.6 L	9-26	10	3	10-6	11	4	2.1	2.2		
BSR 101	I	Rps1a	48.2 (19)	1.9	45.0 (23)	1.5 *	9-20	4	-3	10-1	8	0	1.6	1.9		
BSR 201	II	Rps1b	48.5 (22)	1.4	46.3 (20)	1.2	9-25	10	3	10-4	12	3	2.6	2.8		
Century	II	Rps1a	45.9 (26)	1.2	44.3 (28)	0.4	9-27	10	4	10-6	11	4	1.9	2.1		
Century 84	II	Rps1k	45.8 (17)	0.3	46.8 (17)	2.0 *	9-26	11	4	10-5	12	4	1.6	1.8		
Corsoy 79	II	Rps1c	43.3 (32)	-0.2	43.9 (40)	0.9	9-23	7	0	10-2	7	0	2.6	2.4		
Dassel	0	Rps6	--	--	40.1 (12)	-4.6	--	--	--	9-23	-2	-10	--	1.3		
Dawson	0	Rps1a	--	--	40.3 (27)	-3.0 *	--	--	--	9-19	-5	-12	--	1.6		
Elgin	II	None	47.8 (23)	2.8 *	47.7 (24)	3.6 *	9-23	8	1	10-2	8	0	2.2	2.1		
Elgin 87	II	Rps1k	52.7 (16)	3.7 *	48.6 (17)	3.5 *H	9-21	10	2	10-2	11	2	2.7	2.8		
Glenwood	0	Rps1a	--	--	39.4 (10)	-0.8	--	--	--	9-19	-5	-11	--	1.3		
Gnome 85	II	Rps1k	47.5 (12)	-0.9	42.7 (8)	-1.4	9-26	11	5	10-6	14	6	1.4	1.5		
Hack	II	Rps1a	48.4 (18)	2.4 *	46.7 (18)	2.2 *	9-25	10	3	10-3	11	3	1.6	1.6		
Hardin	I	Rps1a	43.8 (25)	-0.1	45.4 (32)	1.7	9-21	4	-2	9-30	5	-2	2.4	2.3		
Hobbit	III	None	44.1 (23)	1.5	46.3 (5)	0.8	9-30	14	7	10-9	15	6	1.3	1.4		
Hodgson 78	I	Rps1a	41.1 (34)	-2.0 *	42.1 (43)	-0.9	9-17	0	-6	9-25	0	-7	2.0	1.8		
Hoyt	II	Rps1a	49.9 (15)	2.5	43.4 (16)	-1.5	9-25	11	5	10-4	11	3	1.6	1.6		
Keller	II	Rps1c, Rps3	43.2 (16)	-2.0	45.3 (16)	0.1	9-26	10	3	10-4	12	4	2.3	2.4		
Miami	II	Rps1c, Rps3	40.2 (17)	-5.3 *	40.4 (17)	-4.4 *L	9-21	6	-1	9-30	7	-1	2.0	2.0		
Ozzie	0	Rps1a	--	--	37.7 (22)	-4.7 *	--	--	--	9-17	-8	-15	--	1.2		
Pella	III	Rps1a	46.2 (21)	2.8 H	48.0 (21)	3.5 *	9-30	14	7	10-7	13	6	1.9	2.0		
Pella 86	III	Rps1k	51.5 (5)	3.9	--	--	9-29	16	10	--	--	--	1.9	--		
Preston	II	None	50.6 (14)	3.3 *	46.6 (15)	2.0	9-26	13	6	10-5	12	5	2.3	2.3		
Resnik	III	Rps1k	46.0 (4)	-0.2	--	--	10-2	17	12	--	--	--	2.2	--		
Sibley	I	Rps1a	47.1 (16)	0.2	42.8 (20)	-1.3 L	9-15	2	-5	9-25	1	-6	2.2	2.0		
Simpson	0	Rps1a	--	--	37.8 (20)	-4.1 *	--	--	--	9-21	-4	-11	--	1.3		
Vickery	II	Rps1c	43.1 (26)	-1.5	42.7 (29)	-0.9	9-22	6	-1	10-1	6	-1	3.1	2.8		
Vinton 81	II	Rps	39.6 (4)	-6.6 *	37.3 (4)	-4.6 *	9-21	6	0	9-27	9	3	2.3	1.9		
Weber 84	I	Rps1c	40.5 (21)	-4.1	40.7 (25)	-2.3	9-20	4	-3	9-28	5	-3	2.6	2.3		
Wells II	II	Rps1c	42.2 (28)	-2.4 *	41.7 (30)	-1.6 L	9-22	5	-1	10-1	6	-1	1.8	1.6		
Williams 82	III	Rps1k	39.3 (14)	-2.9	36.0 (3)	-7.1	10-5	16	10	10-17	17	8	2.8	2.8		
Zane	III	None	47.4 (15)	2.1	47.1 (12)	1.1	9-30	14	7	10-7	14	5	2.3	2.4		
<b>Agracetus</b>																
108	II	Rps1c	39.2 (4)	-7.0 *	38.5 (4)	-3.5 *	9-21	6	0	9-26	8	2	2.1	1.8		

(cont'd)

\* Statistically significant deviation (P<0.05).  
H Variety exhibits higher than average response to highly productive environments.  
L Variety exhibits lower than average response to highly productive environments.



**TABLE 2. (Continued) Performance Summary for varieties entered in the Michigan trials in 1988. Phytophthora resistance designations denote the following: Type 1a resistant to Races 1, 2, and 10; Type 1b resistant to Races 1 and 3-9; Type 1c resistant to Races 1-3 and 6-10; Type 1k resistant to Races 1-10; Type 3 resistant to Races 1-5, 8, and 9; Type 6 resistant to Races 1-4 and 10.**

Brand / Entry	MG	Phyt. Res. Type	Yield (bu/A) with deviation from mean						Maturity Relative to Checks						Lodging Score	
			Southern			Central			Southern			Central			South.	Central
			Yield (n)	Dev.	Yield (n)	Dev.	Date	H78	C79	Date	H78	C79				
<b>Agripro</b>																
AP1776	I	Rps1a	--	--	--	47.9	(10)	-0.7	--	--	--	9-20	3	-5	--	1.2
AP1989	II	Rps1c	--	--	--	52.1	(10)	3.5	--	--	--	9-26	9	1	--	2.2
AP2190	II	Rps1a	45.1	(12)	0.1	41.2	(12)	0.1	9-24	8	0	10-2	9	1	2.1	1.7
AP2324	II	None	50.9	(8)	2.1	47.3	(5)	3.1	9-21	11	3	9-26	11	5	1.8	1.5
AP3023	II	Rps1a	42.5	(7)	-1.2	--	--	--	9-29	11	5	--	--	--	2.3	--
Ex 2292	II	Rps1c	--	--	--	43.2	(4)	1.3	--	--	--	9-25	8	2	--	1.3
Ex 2740	II	Rps1c	44.6	(4)	-1.6	--	--	--	9-24	9	4	--	--	--	1.8	--
Ex 3800	III	Rps1k	47.9	(4)	1.8	--	--	--	10-5	20	14	--	--	--	2.5	--
<b>Asgrow Seed Co.</b>																
A1525	I	Rps1a	43.2	(4)	-2.6 *	41.6	(19)	-1.9 *	9-26	2	-7	9-24	1	-7	1.1	1.2
A1937	I	Rps1a	43.5	(24)	-0.1	45.5	(29)	1.7	9-18	2	-4	9-27	2	-5	2.0	2.0
A2234	II	Rps1k	50.9	(8)	2.0	46.4	(5)	2.2	9-17	7	0	9-23	8	2	1.4	1.4
A2943	II	Rps1a	49.6	(19)	5.3	47.4	(5)	1.9 H	10-1	15	8	10-9	15	6	1.8	2.2
A3205	III	None	47.4	(4)	1.3	--	--	--	10-3	18	12	--	--	--	2.1	--
<b>Atlas Seed Co.</b>																
280	II		47.9	(4)	1.7	--	--	--	9-26	11	6	--	--	--	1.5	--
<b>Callahan Enterprises, Inc.</b>																
6180 Brand	I	None	46.2	(4)	0.5	46.1	(18)	1.8	9-27	3	-6	9-25	2	-5	1.6	1.3
7260 Brand	II	None	51.1	(11)	4.5 *	50.1	(12)	4.5 *H	9-25	11	4	10-3	12	4	1.8	2.1
7299 Brand	III	None	54.7	(8)	5.8 *	60.1	(5)	4.4 *H	9-26	16	9	10-1	15	6	2.8	2.7
7300 Brand	III	Rps1b, Rps3	46.4	(4)	0.2	--	--	--	9-30	15	10	--	--	--	2.1	--
8252X Brand	II	None	55.1	(8)	6.2	56.5	(8)	6.5 *	9-22	12	5	9-29	13	5	2.1	2.1
9191X Brand Blend	II	None	--	--	--	39.0	(5)	-0.1	--	--	--	9-23	5	-1	--	1.3
9222X Brand Blend	II	None	--	--	--	42.4	(4)	0.5	--	--	--	9-26	8	2	--	1.6
9233X Brand Blend	II	None	--	--	--	42.1	(4)	0.2	--	--	--	9-27	10	4	--	1.4
9270X Brand	II	None	49.0	(4)	2.9	46.5	(4)	4.6 *	9-26	11	6	9-29	11	5	1.6	1.3
9299X Brand Blend	II	None with Rps1b, Rps3	47.3	(4)	1.1	--	--	--	9-24	9	4	--	--	--	2.0	--
<b>Countrymark, Inc.</b>																
FFR 190	II	None	--	--	--	39.9	(5)	0.8	--	--	--	9-26	8	2	--	1.3
FFR 218	II	Rps1c	49.1	(4)	3.0	44.5	(4)	2.6 *	9-24	9	4	9-29	12	6	1.5	1.4
<b>Dairyland Seed Co., Inc.</b>																
DSR-070	0	None	--	--	--	33.7	(5)	-5.4	--	--	--	9-14	-4	-10	--	1.4
DSR-128	I	Rps1c	45.4	(4)	-0.3	42.8	(8)	-1.5	9-25	1	-8	9-23	0	-8	1.1	1.3
DSR-135	I	None	43.5	(4)	-2.3	40.6	(20)	-2.3 *	9-26	2	-6	9-24	0	-7	1.9	1.8
DSR-157	I	Rps1c	43.1	(4)	-3.1	39.8	(5)	0.7	9-18	3	-3	9-21	3	-3	1.6	1.4
DSR-177	II	Rps1a	44.9	(4)	-1.2	39.1	(5)	0.0	9-19	4	-1	9-23	5	-1	1.8	1.4
DSR-247	II	Rps1c	51.8	(8)	3.0	53.9	(8)	3.9 *	9-21	11	4	9-27	11	3	2.0	2.3
DSR-252	II	None	51.9	(8)	3.0	52.6	(8)	2.6	9-20	10	3	9-26	9	2	1.9	1.8
DSR-262	II	None	57.9	(8)	9.1 *	--	--	--	9-25	15	8	--	--	--	2.7	--
DSR-270	II	None	55.7	(8)	6.8 *	47.6	(5)	3.3 *H	9-24	14	7	9-30	14	8	1.7	1.6
DSR-284	III	Rps1c	47.2	(4)	1.1	--	--	--	9-29	14	9	--	--	--	2.3	--
DSR-287	II	None	49.5	(15)	4.2 *	48.5	(4)	2.8	9-30	14	7	10-8	14	6	2.1	2.3
DSR-290	II	None	49.7	(4)	3.5	--	--	--	9-27	12	7	--	--	--	1.7	--
DSR-297	III	Rps1c	47.3	(15)	2.0	45.5	(4)	-0.3	10-2	16	9	10-10	16	8	2.3	2.4
DSR-304	III	None	57.4	(8)	8.6 *	--	--	--	9-30	20	13	--	--	--	2.7	--
DSR-317	III	None	47.6	(15)	2.4	40.0	(4)	-5.7	10-4	19	11	10-12	18	10	2.8	2.6
DST-1104	I	None	--	--	--	35.3	(5)	-3.8 *	--	--	--	9-16	-2	-8	--	1.5
DST-1207	II	Rps1c	41.2	(4)	-5.0 *	41.0	(4)	-0.9	9-21	6	1	9-25	8	2	1.4	1.5
DST-1209	I	None	--	--	--	37.7	(5)	-1.4	--	--	--	9-21	3	-3	--	1.3
DST-1303	II	None	--	--	--	41.8	(5)	2.7	--	--	--	9-26	8	2	--	1.4
DST-2106	II	None	--	--	--	39.0	(4)	-2.9	--	--	--	9-23	5	-1	--	1.5
DST-2312	II	None	50.7	(4)	4.5	--	--	--	9-25	10	5	--	--	--	1.6	--
<b>DeKalb-Pfizer Genetics</b>																
CX187	I	None	--	--	--	46.3	(10)	-2.3 H	--	--	--	9-20	3	-5	--	1.3
CX265	II	Rps1c	43.8	(7)	0.6	46.4	(13)	0.7	10-3	10	3	10-4	13	4	2.1	2.1
CX298	III	Rps	46.6	(4)	0.5	--	--	--	9-30	15	10	--	--	--	2.0	--
CX326	III	Rps1c	49.8	(11)	3.2	43.5	(3)	-1.8 H	9-30	17	10	10-9	15	9	1.9	1.6
<b>Diehl Fields</b>																
DF-101 Brand	I	None	47.5	(8)	0.8	45.9	(14)	0.7	9-17	4	-4	9-24	3	-5	1.5	1.4
DF-101 Blend	II	Rps1c, None	--	--	--	39.4	(4)	-2.5	--	--	--	9-22	5	-2	--	1.5
DF 201 Brand	II	None	48.2	(4)	2.0	44.9	(4)	3.0 *	9-27	12	7	9-30	12	6	2.6	2.4
<b>Funk Seeds Intl.</b>																
G3197	I	None	48.4	(9)	1.0	43.6	(15)	-0.6	9-20	6	-1	9-26	4	-3	1.4	1.3
G3232	II	None	44.5	(7)	0.9	--	--	--	9-29	11	5	--	--	--	2.3	--
<b>Glenn-Garno, Inc.</b>																
1800	I	None	47.9	(8)	-1.0	48.8	(10)	0.3	9-14	4	-3	9-21	3	-4	1.6	1.5
2500	II		48.4	(4)	2.3 *	44.1	(4)	2.2 *H	9-24	9	4	9-29	11	5	1.8	1.7
2800	II	None	54.0	(8)	5.2 *	45.6	(5)	1.3	9-25	15	8	9-29	13	7	2.6	2.0
2900	II	Rps1a	52.4	(8)	3.6	47.3	(5)	3.1	9-23	13	6	9-30	14	8	1.8	1.7

(cont'd)

\* Statistically significant deviation (P<0.05).

H Variety exhibits higher than average response to highly productive environments.

L Variety exhibits lower than average response to highly productive environments.



**TABLE 2. (Continued) Performance Summary for varieties entered in the Michigan trials in 1988. Phytophthora resistance designations denote the following: Type 1a resistant to Races 1, 2, and 10; Type 1b resistant to Races 1 and 3-9; Type 1c resistant to Races 1-3 and 6-10; Type 1k resistant to Races 1-10; Type 3 resistant to Races 1-5, 8, and 9; Type 6 resistant to Races 1-4 and 10.**

Brand / Entry	MG	Phyt. Res. Type	Yield (bu/A) with deviation from mean				Maturity Relative to Checks						Lodging Score	
			Southern		Central		Southern			Central			South.	Central
			Yield (n)	Dev.	Yield (n)	Dev.	Date	H78	C79	Date	H78	C79		
<b>Golden Harvest (Sommer Bros. Seed Co.)</b>														
H-1170 Brand	I	None	48.9 (8)	0.0	46.9 (10)	-1.7	9-14	4	-3	9-20	3	-4	1.8	1.4
H-1285 Brand	II	None	51.0 (13)	5.3 *	48.4 (15)	3.6 *	10-1	14	7	10-6	14	6	2.5	2.1
H-1290 Brand	III		48.7 (4)	2.6	43.5 (4)	1.6	9-29	14	8	10-3	15	9	2.1	1.9
X-278 Brand	II		48.9 (4)	2.8	44.2 (4)	2.3	9-27	12	7	10-1	13	7	1.7	1.5
<b>Great Lakes Hybrids</b>														
GL1999 Brand	II	Rps1a	43.8 (3)	-1.5	46.3 (14)	1.1	10-1	6	0	9-30	9	1	2.2	2.2
GL2206 Brand	II	Rps1a	47.8 (9)	0.4	46.2 (12)	0.7	9-25	10	3	10-3	11	4	2.1	2.0
GL2537 Brand	II	None	47.6 (11)	1.1	40.0 (6)	-1.1	9-25	11	4	10-6	11	3	1.9	2.0
GL2634 Brand	II	None	48.0 (24)	4.0 *	47.0 (21)	2.4 *	9-28	12	5	10-5	11	4	2.3	2.2
<b>Greater Michigan Seed</b>														
828	II		--	--	44.7 (4)	2.8	--	--	--	10-1	13	7	--	1.9
<b>Gries Seed Farms</b>														
GSF-265	II		49.2 (8)	0.4	53.2 (5)	-2.5	9-23	13	6	9-28	12	4	2.0	2.0
GSF-280	II		48.1 (8)	-0.7	52.5 (5)	-3.2	9-19	9	2	9-24	8	0	1.7	1.7
SRF 200	II		42.4 (4)	-3.8 *	--	--	9-23	8	2	--	--	--	2.9	--
<b>Jacques Seed Co.</b>														
J-181 Blend	I		--	--	39.4 (5)	0.3 H	--	--	--	9-21	3	-3	--	1.2
J-231	II	Rps1a	46.8 (16)	2.9 *	45.1 (8)	1.5	9-26	9	2	10-2	10	2	2.0	2.1
J-282	II		51.2 (4)	5.0	--	--	9-24	9	4	--	--	--	2.0	--
<b>Kaiser/Estech</b>														
KE 156	I	None	48.3 (8)	-0.5	50.8 (10)	2.2 H	9-14	4	-4	9-20	3	-5	1.5	-1.3
KE 212	II	Rps1a	48.1 (8)	-0.8	47.3 (8)	-2.7	9-19	9	2	9-25	9	1	1.7	1.8
KE 258 Brand	II	None	47.2 (4)	1.1	44.9 (4)	3.0	9-28	13	7	10-1	13	7	1.7	1.6
KE 266	II	None	51.1 (8)	2.2	45.8 (5)	1.6	9-23	13	6	9-29	13	7	2.3	1.9
KE 298 Brand	III	None	43.9 (4)	-2.3	41.7 (4)	-0.2	10-1	16	11	10-5	18	12	2.0	1.8
KE 310	III	None	54.2 (8)	5.3	--	--	9-29	19	11	--	--	--	2.6	--
Exp. 111009	II		43.7 (4)	-2.5 *	39.4 (5)	0.3	9-22	7	1	9-28	10	4	1.9	1.4
Exp. 510006	II	None	44.9 (4)	-1.3	39.1 (5)	0.0	9-21	6	1	9-24	6	0	1.9	1.6
<b>King Grain, Inc.</b>														
Kador	II		42.2 (4)	-4.0	--	--	9-25	10	5	--	--	--	2.8	--
KG 100	III		--	--	43.1 (4)	1.2	--	--	--	10-3	15	9	--	1.5
KG 4615	III		--	--	51.1 (8)	1.1	--	--	--	10-6	20	12	--	2.8
KG81	I	Rps1c	42.2 (3)	-3.1	44.4 (13)	0.2	9-29	4	-2	9-27	5	-2	1.3	1.6
KG91	II	None	--	--	51.2 (8)	1.2 L	--	--	--	9-27	10	3	--	2.5
PS90	II	Rps1a	43.9 (5)	-1.6	44.6 (19)	0.4 L	10-2	7	-1	10-2	8	1	2.0	2.2
<b>Lakeside States, Inc.</b>														
LSI 116 Brand	II	Rps1a	51.9 (6)	1.3	45.1 (15)	0.9 L	9-25	10	3	10-1	9	2	1.6	1.9
LSI 125 Brand	II	Rps1a	47.5 (11)	0.9	51.2 (9)	2.8	9-24	10	4	9-30	10	3	2.0	1.6
LSI1283 Brand	II		--	--	35.1 (5)	-4.0 *	--	--	--	9-23	5	-1	--	1.5
LSI2182 Brand	II		44.4 (4)	-1.8	42.0 (4)	0.1 L	9-21	6	1	9-26	8	2	1.8	1.7
LSI2283 Brand	II		44.2 (4)	-2.0	41.1 (4)	-0.8 L	9-21	6	1	9-27	9	3	1.7	1.5
LSI2382 Brand	II		48.2 (4)	2.0	41.4 (4)	-0.5	9-23	8	2	9-27	9	3	1.9	1.7
LSI3281 Brand	III		48.4 (4)	2.2	45.8 (4)	3.9	9-29	14	9	10-4	16	10	1.7	1.6
<b>Maumee Valley Seeds, Inc.</b>														
Commander Brand	III	None	53.6 (8)	4.7 *	--	--	10-3	23	16	--	--	--	2.9	--
Eagle Brand	II	None	--	--	50.9 (8)	0.9	--	--	--	9-23	7	-1	--	2.1
Enterprise Brand	II	None	40.6 (9)	-2.4	46.1 (10)	-2.2	10-1	10	3	10-3	13	5	2.0	1.9
Kodiak Brand	III	None	47.3 (15)	2.1	48.5 (4)	2.8	10-1	16	8	10-10	16	8	3.0	3.1
MV-2E1 Brand	II	Rps1a	46.7 (19)	2.4	45.9 (5)	0.4	9-30	13	6	10-9	15	6	2.3	2.2
Sabre Brand	II	None	54.8 (8)	6.0 *	55.7 (8)	5.7 *H	9-22	12	5	9-29	12	5	1.8	1.9
Savage Brand	III		51.8 (4)	5.6	--	--	9-30	15	9	--	--	--	2.0	--
Warrior Brand	II	Rps1a	48.0 (15)	2.7	50.4 (10)	2.1	9-29	13	6	10-5	15	7	2.3	2.4
Washington V Brd	II	Rps1a	46.3 (19)	2.0	44.2 (5)	-1.3 H	10-1	14	7	10-5	11	2	3.2	3.1
<b>McCurdy Seed Co.</b>														
260B Blend	II		46.8 (4)	0.6 H	--	--	9-23	8	3	--	--	--	1.9	--
Riverside 303C	II		46.9 (4)	0.7	--	--	9-20	5	-1	--	--	--	1.9	--
Riverside 1405	II		42.4 (4)	-3.8 *	--	--	9-24	9	4	--	--	--	2.1	--
<b>Midwest Oilseeds, Inc.</b>														
2070 Brand	II		50.0 (4)	3.8	--	--	9-27	12	7	--	--	--	1.7	--
<b>Northrup King Co.</b>														
B152	I	Rps1c, None	44.5 (4)	-0.4	42.8 (19)	-0.7	9-26	-1	-5	9-24	2	-6	1.6	1.4
B236	II	Rps1a	50.8 (8)	1.9	--	--	9-23	13	5	--	--	--	2.0	--
B242	II	None	48.5 (15)	3.5	49.0 (4)	3.9 *	9-27	12	5	10-7	12	5	1.9	1.9
S15-50	I	Rps1c	47.3 (4)	1.6	43.0 (19)	-0.5	9-27	3	-6	9-26	3	-5	1.9	1.6
S23-12	II	None	51.5 (11)	5.0 *	48.8 (12)	3.2 *	9-21	8	1	9-28	7	-1	1.2	1.2
S29-20	III	Rps1a	53.4 (8)	4.6	--	--	9-25	15	8	--	--	--	2.0	--

(cont'd)

\* Statistically significant deviation (P<0.05).

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L Variety exhibits lower than average response to highly productive environments.



**TABLE 2. (Continued) Performance Summary for varieties entered in the Michigan trials in 1988. Phytophthora resistance designations denote the following: Type 1a resistant to Races 1, 2, and 10; Type 1b resistant to Races 1 and 3-9; Type 1c resistant to Races 1-3 and 6-10; Type 1k resistant to Races 1-10; Type 3 resistant to Races 1-5, 8, and 9; Type 6 resistant to Races 1-4 and 10.**

Brand / Entry	MG	Phyt. Res. Type	Yield (bu/A) with deviation from mean						Maturity Relative to Checks						Lodging Score	
			Southern			Central			Southern			Central			South.	Central
			Yield (n)	Dev.		Yield (n)	Dev.		Date	H78	C79	Date	H78	C79		
<b>Pioneer Hi-Bred Intl.</b>																
9161	I		--	--	--	40.4	(5)	1.3	--	--	--	9-21	3	-3	--	1.3
9202	I	None	--	--	--	49.1	(8)	-0.9	--	--	--	9-21	4	-3	--	1.4
9271	II	None	47.3	(19)	3.0 *	49.4	(14)	2.9 *	9-26	10	2	10-2	10	3	1.6	1.7
9272	II		47.5	(4)	1.3	45.8	(4)	3.9	9-22	7	2	9-27	10	4	1.6	1.5
9293	II		51.8	(4)	5.6	45.6	(4)	3.7	9-27	12	7	10-3	15	9	2.2	1.7
9301	III		46.4	(4)	0.3	--	--	--	9-28	13	8	--	--	--	2.5	--
<b>Pro-Seed (ProSoy)</b>																
PS138	I	None	46.9	(8)	-2.0	47.9	(10)	-0.7 H	9-14	4	-4	9-20	3	-5	1.6	1.5
PS215	II		50.8	(4)	4.6	47.0	(4)	5.1	9-22	7	2	9-27	10	4	1.8	1.7
PS225	II		46.1	(4)	-0.1	45.4	(4)	3.5	9-24	9	4	9-28	11	5	2.2	2.0
PS246A	II		50.1	(8)	1.2	53.6	(8)	3.6	9-23	13	6	9-29	13	5	2.2	2.5
PS259	II	None	51.8	(8)	3.0	--	--	-- *	9-23	13	6	--	--	--	2.5	--
PS330	III	None	53.3	(8)	4.4	--	--	--	9-28	18	10	--	--	--	2.6	--
<b>Rupp Seeds, Inc.</b>																
RS2308	II		52.5	(8)	3.7	53.2	(8)	3.2 *	9-20	10	3	9-25	8	1	1.7	2.0
RS2323	II		45.8	(4)	-0.4	40.7	(4)	-1.2	9-23	8	3	9-27	9	3	1.6	1.6
RS2460P	II	None	46.6	(13)	4.2 *	47.1	(19)	2.9 *H	10-1	11	4	10-6	12	5	2.2	2.2
RS2500	II	None	50.4	(11)	3.8	47.2	(3)	1.9	9-28	15	8	10-7	12	6	1.9	1.8
RS2544	III	None	48.2	(15)	2.9	43.8	(4)	-1.9	10-3	18	11	10-14	20	12	2.7	2.9
<b>J.M. Schultz Seed Co.</b>																
JMS 2083 Brand	II		--	--	--	45.1	(4)	3.2	--	--	--	9-27	9	3	--	1.7
JMS 2288 Brand	II		49.6	(4)	3.5	48.3	(4)	6.4 *	9-25	10	4	9-30	12	6	1.8	1.9
JMS 2382 Brand	II		48.0	(4)	1.9 *	42.0	(4)	0.1	9-27	12	7	10-1	13	7	2.0	1.7
JMS 2987 Brand	II		44.3	(4)	-1.9	--	--	--	9-27	12	7	--	--	--	1.8	--
<b>Scott Farm Seed Co.</b>																
Scotts 3665	III	None	56.0	(8)	7.2 *	--	--	--	9-29	19	11	--	--	--	3.1	--
<b>Seedex, Inc.</b>																
Seedex 190	I		--	--	--	37.2	(5)	-1.9	--	--	--	9-21	3	-3	--	1.3
Seedex 253	II		--	--	--	44.1	(4)	2.2 H	--	--	--	9-25	7	1	--	1.7
Seedex 260	II		--	--	--	48.2	(4)	6.3	--	--	--	10-1	13	7	--	1.7
<b>Stine Seed Farm, Inc.</b>																
Stine 1820 Brand	I		--	--	--	40.0	(5)	0.9	--	--	--	9-22	3	-2	--	1.4
Stine 2750 Brand	II	None	--	--	--	51.7	(8)	1.7	--	--	--	9-28	12	4	--	2.0
Stine 2940 Brand	II		47.7	(4)	1.5	--	--	--	9-21	6	1	--	--	--	1.5	--
Stine 2960 Brand	II		--	--	--	43.0	(4)	1.1	--	--	--	9-28	11	5	--	1.4
Stine 3810 Brand	III		46.5	(4)	0.3	--	--	--	9-28	13	7	--	--	--	2.3	--
<b>Terra Intl., Inc.</b>																
Decathlon Brand	II	None	54.3	(5)	3.8	51.4	(8)	1.4	9-19	11	3	9-26	9	2	2.4	2.3
Exp. 275 Brand	III	None	54.7	(8)	5.9 *	53.5	(8)	3.5 *	9-27	17	10	10-2	15	8	2.4	2.5
Hurdle Brand	II	Rps1a	46.7	(6)	-1.4	43.0	(12)	-2.5 L	9-24	10	2	10-1	9	2	1.7	1.7
Javelin Brand	II	None	49.6	(4)	3.5 *	43.1	(4)	1.2	9-24	9	3	9-28	11	5	1.9	1.7
Medalist Brand	II	None	51.1	(4)	4.9 *	44.8	(4)	2.9	9-24	9	4	9-28	11	5	2.0	1.6
Olympian Brand	II	None	48.1	(11)	1.6	47.1	(9)	-1.4	9-26	12	5	10-3	13	5	2.0	2.0
Runner III Brand	I	None	--	--	--	38.2	(5)	-0.9	--	--	--	9-21	2	-3	--	1.3
Sprint Brand	III	None	50.3	(11)	3.8 *	50.5	(9)	2.0	9-28	15	8	10-4	14	7	2.5	2.4

\* Statistically significant deviation (P<0.05).

H Variety exhibits higher than average response to highly productive environments.

L Variety exhibits lower than average response to highly productive environments.



**TABLE 3. Southern Michigan.**

Brand	Entry	Yield (bu/A)										Matur- ity (days)	Height (in)	Lodging Score
		Entire Southern Region		Southeast (Lenawee Co.)		Southwest (St. Joseph Co.)		Far Southwest (Berrien Co.)		South Central (Ingham Co.)				
		1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)			
Public	Amcor	42.9	43.8 (25)	36.6	49.2 (9)	46.9	36.2 (6)	45.2	43.3 (5)	42.6	43.9 (5)	4	43	3.1
Public	Beeson 80	40.2	36.7 (25)	39.0	40.5 (9)	39.0	31.4 (6)	44.4	39.8 (5)	38.3	33.2 (5)	4	38	2.6
Public	BSR 101	46.8	48.2 (19)	38.3	49.8 (8)	52.3*	46.1 (4)	48.6	48.6 (3)	48.1*	46.9 (4)	0	36	1.5
Public	BSR 201	47.1	48.5 (22)	39.8	50.0 (11)	48.6*	44.3 (4)	51.4	48.1 (3)	48.5*	49.2 (4)	5	36	2.1
Public	Century	45.3	45.9 (26)	47.1	51.7 (10)	47.5	38.9 (6)	46.2	44.6 (5)	40.5	43.9 (5)	5	36	1.9
Public	Century 84	42.9	45.8 (17)	35.5	47.4 (6)	48.5*	43.0 (4)	43.4	47.0 (3)	44.1	45.5 (4)	6	35	1.9
Public	Corsoy 79 †	41.8	43.3 (32)	38.8	50.4 (12)	44.3	33.3 (8)	41.8	41.6 (6)	42.2	44.2 (6)	9-20	38	2.4
Public	Elgin	48.1*	47.8 (23)	42.4	50.3 (9)	51.1*	44.5 (5)	49.5	46.2 (4)	49.6*	48.0 (5)	2	33	2.1
Public	Elgin 87	47.7*	52.7 (16)	40.5	53.1 (8)	52.5*	50.5 (3)	52.9	65.1 (2)	45.1	45.4 (3)	4	33	2.1
Public	Hack	49.2*	48.4 (18)	42.6	49.7 (7)	49.2*	45.8 (4)	54.0	49.7 (3)	51.0*	48.0 (4)	5	36	1.7
Public	Hardin	41.1	43.8 (25)	40.8	49.9 (9)	44.4	37.4 (6)	40.6	41.3 (5)	38.4	43.0 (5)	-1	36	2.6
Public	Hobbit	43.3	44.1 (23)	43.0	49.5 (7)	47.0	35.8 (7)	46.3	46.4 (4)	36.9	46.3 (5)	10	24	1.5
Public	Hodgson 78	40.8	41.1 (34)	35.9	46.9 (12)	39.2	33.3 (9)	42.1	39.4 (7)	46.0	43.0 (6)	-5	33	2.0
Public	Hoyt	46.4	49.9 (15)	37.2	52.1 (7)	52.5*	50.1 (3)	54.7*	59.6 (2)	41.1	38.1 (3)	4	24	1.7
Public	Keller	40.9	43.2 (16)	37.3	43.6 (5)	37.6	36.6 (4)	40.9	46.1 (3)	47.7*	47.3 (4)	4	35	2.2
Public	Miami	36.4	40.2 (17)	34.2	42.9 (6)	42.1	35.0 (4)	38.5	44.2 (3)	31.1	38.5 (4)	1	36	1.9
Public	Pella	44.8	46.2 (21)	43.0	51.2 (6)	42.2	36.9 (6)	46.3	47.0 (4)	47.7*	50.6 (5)	11	39	2.0
Public	Pella 86	47.2	51.5 (5)	39.3	--	49.4*	--	50.0	--	50.1*	59.5 (2)	9	37	1.8
Public	Preston	48.6*	50.6 (14)	42.2	50.4 (6)	46.1	46.1 (3)	51.9	57.3 (2)	54.2*	51.1 (3)	6	39	1.9
Public	Resnik	46.0	--	35.2	--	47.7	--	51.3	--	49.8*	--	12	34	2.2
Public	Sibley	41.4	47.1 (16)	35.9	49.5 (8)	45.8	38.7 (3)	40.4	52.2 (2)	43.3	45.8 (3)	-3	33	1.8
Public	Vickery	39.8	43.1 (26)	36.5	49.5 (10)	44.4	35.1 (6)	46.2	43.0 (5)	32.0	40.3 (5)	-1	39	2.9
Public	Vinton 81	39.6	--	35.9	--	38.8	--	40.3	--	43.4	--	1	36	2.3
Public	Weber 84	35.4	40.5 (21)	27.2	43.5 (7)	53.4*	38.1 (5)	35.6	39.1 (4)	25.3	39.9 (5)	-2	35	2.3
Public	Wells II	42.4	42.2 (28)	32.6	45.2 (10)	49.1*	36.4 (7)	43.5	43.0 (6)	44.4	43.3 (5)	1	37	2.1
Public	Williams 82	40.2	39.3 (14)	37.5	47.4 (4)	33.9	34.5 (4)	49.9	38.2 (3)	39.4	36.0 (3)	15	40	3.0
Public	Zane	44.0	47.4 (15)	41.9	49.9 (4)	46.1	45.8 (4)	45.3	50.7 (3)	42.5	43.9 (4)	8	36	1.9
Agracetus	108	39.1	--	36.7	--	41.0	--	36.7	--	42.2	--	1	35	2.1
AgriPro	AP2324	47.1	50.9 (8)	40.9	46.0 (2)	50.0*	48.1 (2)	48.1	56.2 (2)	49.5*	53.5 (2)	3	33	1.7
AgriPro	AP3023	43.5	42.5 (7)	38.9	48.3 (2)	46.6	42.3 (2)	43.0	--	45.5	36.6 (2)	6	39	2.2
AgriPro	Ex2740	44.5	--	39.0	--	47.6	--	43.4	--	48.3*	--	4	35	1.8
AgriPro	Ex3800	47.9*	--	38.6	--	45.0	--	54.9*	--	53.2*	--	14	38	2.5
Asgrow	A1937	44.8	43.5 (24)	42.1	49.5 (8)	45.6	36.6 (6)	49.4	42.9 (5)	42.0	43.0 (5)	-2	34	2.0
Asgrow	A2234	45.5	50.9 (8)	40.2	48.3 (2)	50.9*	49.7 (2)	45.1	53.3 (2)	46.0	52.4 (2)	2	34	1.5
Asgrow	A2943	49.7*	49.6 (19)	41.2	52.6 (5)	52.0*	46.7 (5)	58.4*	52.1 (4)	47.1*	47.4 (5)	9	37	1.7
Asgrow	A3205	47.4	--	45.9	--	45.5	--	56.8*	--	41.4	--	13	35	2.1
Atlas	280 Brand	47.9*	--	40.5	--	50.9*	--	55.9*	--	44.1	--	6	32	1.5
Callahan	7260 Brand	48.9*	51.1 (11)	39.5	50.6 (3)	52.1*	46.3 (3)	53.8	62.0 (2)	50.0*	49.1 (3)	4	31	1.7
Callahan	7299 Brand	48.6*	54.7 (8)	45.8	50.8 (2)	53.1*	56.9 (2)	49.5	58.9 (2)	46.2	52.1 (2)	8	38	2.1
Callahan	7300 Brand	46.4	--	36.6	--	47.1	--	49.9	--	51.9*	--	10	35	2.1
Callahan	8252X Brand	47.2	55.1 (8)	43.0	49.1 (2)	50.0*	53.2 (2)	46.0	59.1 (2)	49.9*	59.0 (2)	3	34	1.8
Callahan	9270X Brand	49.0*	--	40.3	--	50.7*	--	53.7	--	51.3*	--	6	32	1.6
Callahan	9299X Brand Blend	47.3	--	37.3	--	51.2*	--	50.5	--	50.0*	--	4	32	2.0
Countrymark	Exp. 5259	49.2*	--	41.1	--	54.4*	--	50.7	--	50.3*	--	3	34	1.5
Dairyland	DSR-157	43.0	--	37.7	--	42.5	--	45.0	--	47.0*	--	-2	32	1.6
Dairyland	DSR-177	44.9	--	35.9	--	48.8*	--	45.5	--	49.5*	--	-1	32	1.8
Dairyland	DSR-247	45.7	51.8 (8)	37.4	46.5 (2)	52.2*	51.6 (2)	44.2	54.0 (2)	48.8*	55.3 (2)	5	36	2.1
Dairyland	DSR-252	47.2	51.9 (8)	41.2	47.1 (2)	48.9*	50.1 (2)	47.1	58.1 (2)	51.5*	52.3 (2)	4	32	1.8
Dairyland	DSR-262	50.5*	57.9 (8)	43.0	52.3 (2)	51.3*	54.3 (2)	60.1*	67.1 (2)	47.7*	58.1 (2)	6	34	1.8
Dairyland	DSR-270	49.9*	55.7 (8)	44.2	53.5 (2)	50.7*	52.6 (2)	55.8*	62.1 (2)	49.2*	54.6 (2)	7	32	1.8
Dairyland	DSR-284	47.2	--	48.9*	--	51.3*	--	46.4	--	42.3	--	9	37	2.3
Dairyland	DSR-287	47.9*	49.5 (15)	42.0	50.5 (4)	48.7*	46.4 (4)	55.2*	53.6 (3)	45.7	48.5 (4)	6	37	1.6
Dairyland	DSR-290	49.6*	--	43.8	--	49.3*	--	57.3*	--	48.2*	--	7	32	1.7
Dairyland	DSR-297	47.1	47.3 (15)	40.7	50.9 (4)	53.1*	43.0 (4)	48.5	50.7 (3)	46.2	45.5 (4)	9	38	1.9
Dairyland	DSR-304	51.9*	57.4 (8)	41.4	50.5 (2)	53.9*	55.8 (2)	63.3*	65.0 (2)	48.9*	58.5 (2)	11	36	2.4
Dairyland	DSR-317	47.4	47.6 (15)	44.3	52.4 (4)	49.5*	46.5 (4)	52.8	53.0 (3)	43.1	40.0 (4)	14	41	2.5
Dairyland	DST-1207	41.2	--	35.0	--	45.1	--	44.5	--	40.0	--	1	34	1.4
Dairyland	DST-2312	50.6*	--	45.0	--	50.7*	--	58.4*	--	48.6*	--	5	33	1.6
DeKalb-Pfizer	CX298	46.6	--	40.0	--	47.4	--	54.0	--	45.1	--	10	33	1.9
DeKalb-Pfizer	CX326	44.7	49.8 (11)	37.8	50.6 (3)	47.0	46.5 (3)	49.4	62.9 (2)	44.5	43.5 (3)	9	35	1.8
Diehl Fields	DF 201 Brand	48.2*	--	41.8	--	48.3*	--	50.9	--	51.6*	--	7	37	2.6
Funk	G3197	45.8	48.4 (9)	38.5	47.1 (2)	50.2*	46.3 (2)	50.5	55.5 (2)	44.1	45.9 (3)	-1	31	1.4
Funk	G3232	45.9	44.5 (7)	41.5	47.7 (2)	50.1*	43.5 (2)	48.3	--	43.7	40.6 (2)	6	37	2.0
Glenn-Garno	1800	46.0	47.9 (8)	33.8	41.6 (2)	46.4	46.0 (2)	54.2	54.2 (2)	49.5*	49.7 (2)	-1	34	1.6
Glenn-Garno	2500	48.4*	--	41.2	--	52.5*	--	51.2	--	48.7*	--	4	32	1.8
Glenn-Garno	2800	49.9*	54.0 (8)	44.2	51.1 (2)	54.6*	52.1 (2)	53.9	60.1 (2)	47.0*	52.9 (2)	6	35	2.5
Glenn-Garno	2900	44.9	52.4 (8)	41.4	47.6 (2)	41.1	48.3 (2)	46.3	56.0 (2)	50.7*	57.9 (2)	5	36	1.5
Golden Harvest	H-1170 Brand	45.7	48.9 (8)	39.7	48.0 (2)	51.6*	46.4 (2)	43.3	50.8 (2)	48.2*	50.3 (2)	-2	34	1.4
Golden Harvest	H-1285 Brand	52.8*	51.0 (13)	47.1	50.5 (3)	54.6*	49.8 (3)	60.8*	57.2 (3)	48.6*	47.5 (4)	6	38	2.3
Golden Harvest	H-1290 Brand	48.7*	--	43.8	--	47.4	--	53.9	--	49.8*	--	8	41	2.1
Golden Harvest	X-278 Brand	48.9*	--	39.9	--	49.9*	--	55.6*	--	50.2*	--	7	33	1.7
GLH	GL2206 Brand	43.5	47.8 (9)	38.8	44.4 (2)	43.2	46.9 (2)	45.6	54.3 (2)	46.4	46.4 (3)	3	40	2.0
GLH	GL2537 Brand	46.5	47.6 (11)	41.1	48.3 (3)	45.9	43.9 (3)	54.4	57.5 (2)	44.6	44.1 (3)	4	35	1.8
GLH	GL2634 Brand	45.7	48.0 (24)	43.2	52.6 (8)	50.3*	41.1 (6)	43.5	49.1 (5)	45.8	47.9 (5)	6	38	2.8
Gries	GSF-265	47.3	49.2 (8)	39.9	46.9 (2)	51.2*	49.3 (2)	47.9	53.2 (2)	50.2*	47.6 (2)	5	34	1.8
Gries	GSF-280	47.5	48.1 (8)	43.9	44.9 (2)	46.8	46.5 (2)	50.1	56.4 (2)	49.3*	44.9 (2)	2	34	1.7
Gries	SRF 200	42.4	--	35.7	--	47.9	--	45.8	--	40.1	--	2	41	2.9
Jacques	J-282	51.2*	--	43.1	--	48.4*	--	58.9*	--	54.3*	--	4	36	2.0
Kaiser/Estech	KE 156	46.2	48.3 (8)	39.0	46.0 (2)	52.4*	46.7 (2)	40.7	49.4 (2)	52.8*	51.4 (2)	-2	33	1.4
Kaiser/Estech	KE 212	45.6	48.1 (8)	42.1	47.8 (2)	49.1*	48.8 (2)	42.0	47.8 (2)	49.1*	48.0 (2)	1	35	1.6
<b>Test Mean</b>		46.22		40.62		48.61		49.19		46.25		4.9	35.5	1.98
<b>LSD (.05)</b>		5.12		2.07		6.45		8.80		10.80		2.1	2.8	0.53

† Check variety used to calculate deviation from standard maturity.  
 \* Not significantly different from the highest yield within that column.

(cont'd)



**TABLE 3. (Continued) Southern Michigan.**

Brand	Entry	Yield (bu/A)										Maturity (days)	Height (in)	Lodging Score
		Entire Southern Region		Southeast (Lenawee Co.)		Southwest (St. Joseph Co.)		Far Southwest (Berrien Co.)		South Central (Ingham Co.)				
		1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)			
Kaiser/Estech	KE 266	46.8	51.1 (8)	42.6	44.8 (2)	46.6	49.3 (2)	45.6	58.9 (2)	52.4*	51.4 (2)	7	36	2.3
Kaiser/Estech	KE 310	46.7	54.2 (8)	41.0	48.7 (2)	51.9*	56.6 (2)	45.4	57.4 (2)	48.5*	54.2 (2)	9	37	2.1
Kaiser/Estech	KE 258 Brand	47.2	--	36.3	--	48.1	--	52.4	--	52.0*	--	7	31	1.7
Kaiser/Estech	KE 298 Brand	43.9	--	38.7	--	47.8	--	51.3	--	37.8	--	11	34	2.0
Kaiser/Estech	Exp. 111009	43.7	--	38.1	--	47.4	--	44.6	--	44.7	--	1	35	1.8
Kaiser/Estech	Exp. 510006	44.8	--	37.5	--	46.7	--	46.4	--	48.8*	--	0	37	1.8
King Grain	Kador	42.2	--	37.4	--	47.5	--	45.0	--	38.7	--	5	40	2.8
Lakeside States	LSI 125 Brand	44.3	47.5 (11)	37.9	47.5 (3)	48.6*	41.9 (3)	47.2	57.4 (2)	43.4	46.4 (3)	4	38	2.0
Lakeside States	LSI2182 Brand	44.4	--	40.8	--	45.8	--	45.2	--	45.8	--	1	34	1.8
Lakeside States	LSI2283 Brand	44.2	--	38.8	--	49.5*	--	46.6	--	41.7	--	1	35	1.7
Lakeside States	LSI2382 Brand	48.2*	--	43.1	--	50.8*	--	54.7*	--	44.1	--	2	34	1.9
Lakeside States	LSI3281 Brand	48.4*	--	44.4	--	47.9	--	55.4*	--	45.7	--	9	35	1.7
Maumee Valley	Commander Brand	47.5	53.6 (8)	44.8	54.2 (2)	47.2	51.6 (2)	48.7	53.7 (2)	49.3*	54.9 (2)	14	38	2.4
Maumee Valley	Kodiak Brand	46.3	47.3 (15)	44.7	50.6 (4)	44.4	42.3 (4)	43.8	48.0 (3)	52.3*	48.5 (4)	9	38	2.5
Maumee Valley	Sabre Brand	47.7	54.8 (8)	42.0	49.8 (2)	51.5*	53.5 (2)	48.6	59.4 (2)	48.5*	56.8 (2)	4	34	1.7
Maumee Valley	Savage Brand	51.7*	--	44.0	--	51.8*	--	61.8*	--	49.4*	--	9	32	2.0
Maumee Valley	Warrior Brand	48.0*	48.0 (15)	48.5*	51.2 (4)	47.0	43.3 (4)	49.1	51.2 (3)	47.4*	47.0 (4)	8	37	2.0
Maumee Valley	Washington V Brand	47.7*	46.3 (19)	42.3	50.0 (5)	47.5	44.2 (5)	53.4	46.8 (4)	47.7*	44.2 (5)	10	41	3.0
Maumee Valley	MV-2E1 Brand	48.0*	46.7 (19)	47.3	50.4 (5)	53.8*	43.3 (5)	48.1	47.2 (4)	42.7	45.9 (5)	7	36	2.3
McCurdy	Riverside 303C	46.9	--	40.9	--	50.8*	--	49.2	--	46.6	--	4	36	2.1
McCurdy	Riverside 1405	42.4	--	36.4	--	46.0	--	42.7	--	44.3	--	0	38	1.9
McCurdy	260B Blend	46.8	--	39.0	--	50.8*	--	50.5	--	46.8	--	3	35	1.8
Midwest Oilseeds	2070 Brand	50.0*	--	44.6	--	48.6*	--	57.3*	--	49.4*	--	7	34	1.6
Northrup King	B236	45.2	50.8 (8)	39.3	48.8 (2)	50.0*	50.7 (2)	42.8	52.8 (2)	48.6*	51.0 (2)	4	35	1.9
Northrup King	B242	46.1	48.5 (15)	39.2	50.1 (4)	45.4	41.8 (4)	49.4	54.4 (3)	50.3*	49.0 (4)	5	41	2.0
Northrup King	S23-12	49.1*	51.5 (11)	41.3	50.8 (3)	54.2*	50.2 (3)	49.4	56.9 (2)	51.3*	50.0 (3)	1	36	1.2
Northrup King	S29-20	48.8*	53.4 (8)	47.6	51.0 (2)	54.7*	55.9 (2)	46.1	60.0 (2)	47.7*	46.8 (2)	7	35	1.7
Pioneer	9271	46.3	47.3 (19)	39.7	51.2 (5)	50.1*	44.5 (5)	50.3	45.2 (4)	45.2	48.0 (5)	3	32	1.4
Pioneer	9272	47.5	--	37.7	--	54.6*	--	50.6	--	47.0*	--	2	34	1.6
Pioneer	9293	51.8*	--	40.8	--	53.7*	--	59.0*	--	53.5*	--	7	32	2.2
Pioneer	9301	46.4	--	36.0	--	53.8*	--	54.5*	--	41.3	--	8	42	2.5
ProSoy	PS138	44.3	46.9 (8)	38.5	46.0 (2)	49.1*	43.8 (2)	47.6	50.4 (2)	41.9	47.4 (2)	-2	33	1.4
ProSoy	PS215	50.8*	--	43.2	--	54.2*	--	48.0	--	57.7*	--	2	35	1.8
ProSoy	PS225	46.1	--	37.7	--	48.5*	--	43.7	--	54.5*	--	4	38	2.2
ProSoy	PS246A	45.6	50.1 (8)	42.1	47.4 (2)	43.9	42.5 (2)	49.0	58.3 (2)	47.6*	52.2 (2)	5	35	2.0
ProSoy	PS259	43.6	51.8 (8)	41.2	49.9 (2)	48.0	51.6 (2)	41.9	54.5 (2)	43.2	51.4 (2)	1	34	1.9
ProSoy	PS330	46.0	53.3 (8)	44.6	53.3 (2)	48.2	52.7 (2)	50.4	59.1 (2)	40.7	48.0 (2)	8	36	1.8
Rupp	RS2308	47.5	52.5 (8)	41.9	47.9 (2)	49.7*	49.2 (2)	52.2	60.5 (2)	46.2	52.4 (2)	4	34	1.9
Rupp	RS2323	45.8	--	42.8	--	46.7	--	51.7	--	42.0	--	3	32	1.6
Rupp	RS2500	45.3	50.4 (11)	40.3	51.2 (3)	48.2*	46.4 (3)	49.9	60.0 (2)	42.9	47.2 (3)	9	35	1.8
Rupp	RS2544	43.3	48.2 (15)	36.6	47.9 (4)	46.9	47.6 (4)	53.7	55.2 (3)	36.1	43.8 (4)	12	40	2.9
J.M. Schultz	JMS 2288 Brand	49.6*	--	44.1	--	49.6*	--	48.9	--	55.8*	--	4	35	1.8
J.M. Schultz	JMS 2382 Brand	48.0*	--	42.5	--	52.0*	--	50.6	--	46.9	--	7	37	2.0
J.M. Schultz	JMS 2987 Brand	44.3	--	39.7	--	50.5*	--	46.8	--	40.0	--	7	41	1.8
Scott	Scotts 3665	48.2*	56.0 (8)	43.5	52.9 (2)	46.8	51.7 (2)	52.0	62.0 (2)	50.3*	57.6 (2)	9	38	2.5
Stine	Stine 2940 Brand	47.7	--	43.1	--	50.6*	--	48.5	--	48.4*	--	1	32	1.5
Stine	Stine 3810 Brand	46.4	--	40.3	--	48.0	--	49.2	--	48.3*	--	7	40	2.3
Terra	Javelin Brand	49.6*	--	42.7	--	50.5*	--	54.8*	--	50.5*	--	3	35	1.9
Terra	Medalist Brand	51.1*	--	43.0	--	51.0*	--	55.4*	--	54.9*	--	4	36	2.0
Terra	Olympian Brand	47.8*	48.1 (11)	44.2	51.1 (3)	52.5*	46.0 (3)	43.6	56.7 (2)	50.8*	41.6 (3)	7	35	2.0
Terra	Sprint Brand	49.9*	50.3 (11)	44.1	50.6 (3)	50.9*	45.2 (3)	50.8	57.0 (2)	53.6*	50.7 (3)	6	37	2.3
Terra	Exp. 275 Brand	50.9*	54.7 (8)	50.5*	52.9 (2)	51.1*	55.0 (2)	56.4*	60.4 (2)	45.7	50.7 (2)	9	38	2.3
	<b>Test Mean</b>	46.22		40.62		48.61		49.19		46.25		4.9	35.5	1.98
	<b>CV</b>	8.0%		3.1%		8.1%		10.8%		14.0%		6.0%	5.8%	19.3%
	<b>LSD (.05)</b>	5.12		2.07		6.45		8.80		10.80		2.1	2.8	0.53

\* Not significantly different from the highest yield within that column.



**TABLE 4. Central Michigan.**

Brand	Entry	Yield (bu/A)										Maturity (days)	Height (in)	Lodging Score	
		Entire Central Region		South Central (Ingham Co.)		Central (Saginaw Co.)		East Central (Sanilac Co.)		West Central (Montcalm Co.)					
		1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)				
Public	Amcor	39.8	44.7 (25)	42.6	43.9 (5)	51.1	44.2 (10)	32.6*	47.2 (9)	32.7	--	--	6	37	2.4
Public	Beeson 80	40.5	37.6 (27)	38.3	33.2 (5)	58.5	42.3 (11)	30.4	35.1 (10)	34.8	--	--	6	34	1.7
Public	BSR 101	41.9	45.0 (23)	48.1*	46.9 (4)	58.9	46.5 (8)	26.1	46.1 (6)	34.6	--	--	1	32	1.5
Public	BSR 201	43.4*	46.3 (20)	48.5*	49.2 (4)	60.1	46.1 (9)	33.0*	47.1 (6)	32.0	--	--	7	33	1.9
Public	Century	41.2	44.3 (28)	40.5	43.9 (5)	57.3	45.1 (12)	30.5	44.3 (10)	36.4	--	--	5	34	1.7
Public	Century 84	41.6	46.8 (17)	44.1	45.5 (4)	55.9	47.5 (6)	29.1	48.4 (6)	37.4*	--	--	6	33	1.6
Public	Corsoy 79 †	36.4	43.9 (40)	42.2	44.2 (6)	48.1	44.4 (16)	27.0	45.6 (12)	28.4	--	--	9-23	34	1.9
Public	Dawson	34.0	40.3 (27)	38.5	--	51.5	41.0 (9)	24.4	42.5 (8)	21.5	--	--	-10	26	1.4
Public	Elgin	45.2*	47.7 (24)	49.6*	48.0 (5)	63.1	50.1 (10)	34.8*	48.2 (7)	33.6	--	--	4	32	1.8
Public	Elgin 87	43.6*	48.6 (17)	45.1*	45.4 (3)	62.3	51.4 (7)	28.5	52.3 (5)	38.6*	--	--	5	31	2.0
Public	Glenwood	33.6	39.4 (10)	38.1	--	53.6	50.9 (3)	22.6	--	20.2	--	--	-9	24	1.4
Public	Hack	46.5*	46.7 (18)	51.0*	48.0 (4)	62.0	46.0 (7)	31.0	47.5 (6)	42.2*	--	--	6	33	1.5
Public	Hardin	37.4	45.4 (32)	38.4	43.0 (5)	51.4	49.1 (11)	31.9	47.1 (10)	27.9	--	--	-1	33	2.0
Public	Hodgson 78	39.4	42.1 (43)	46.0	43.0 (6)	53.6	42.4 (17)	31.1	43.5 (13)	26.8	--	--	-6	33	2.0
Public	Hoyt	40.8	43.4 (16)	41.1	38.1 (3)	59.4	46.0 (7)	30.5	45.1 (5)	32.1	--	--	4	26	1.4
Public	Keller	41.7	45.3 (16)	47.7*	47.3 (4)	52.2	45.1 (5)	30.6	45.7 (6)	36.1	--	--	6	35	1.9
Public	Miami	34.7	40.4 (17)	31.1	38.5 (4)	49.4	42.8 (6)	26.3	40.6 (6)	32.0	--	--	2	33	1.6
Public	Ozzie	33.0	37.7 (22)	37.5	--	54.0	42.4 (9)	22.9	34.9 (4)	17.7	--	--	-12	24	1.2
Public	Pella	44.0*	48.0 (21)	47.7*	50.6 (5)	60.9	45.6 (7)	29.2	49.8 (8)	38.4*	--	--	11	37	1.9
Public	Preston	44.3*	46.6 (15)	54.2*	51.1 (3)	56.9	46.5 (6)	29.6	46.1 (5)	36.8	--	--	7	35	1.9
Public	Sibley	38.9	42.8 (20)	43.3	45.8 (3)	52.4	44.2 (8)	28.5	42.8 (5)	31.4	--	--	-2	30	1.6
Public	Simpson	35.5	37.8 (20)	40.0	--	49.7	39.2 (8)	27.8	36.7 (4)	24.4	--	--	-9	27	1.4
Public	Vickery	34.1	42.7 (29)	32.0	40.3 (5)	49.0	43.7 (13)	29.2	44.3 (10)	26.2	--	--	-2	35	2.3
Public	Vinton 81	37.3	37.3 (4)	43.4	--	54.6	--	24.0	--	27.3	--	--	3	34	1.9
Public	Weber 84	34.2	40.7 (25)	25.3	39.9 (5)	54.0	42.3 (8)	36.9*	43.1 (7)	20.6	--	--	-2	34	1.9
Public	Wells II	41.0	41.7 (30)	44.4	43.3 (5)	55.2	44.2 (13)	29.9	38.8 (11)	34.3	--	--	3	35	1.7
Agracetus	108	38.4	--	42.2	--	55.0	--	26.0	--	30.6	--	--	2	31	1.8
AgriPro	AP1776	40.9	47.9 (10)	44.5	48.5 (2)	63.2	60.3 (2)	28.8	47.8 (3)	27.0	--	--	-2	29	1.2
AgriPro	AP1989	42.0	52.1 (10)	48.0*	47.7 (2)	59.4	56.3 (2)	34.1*	59.9 (3)	26.3	--	--	2	32	1.9
AgriPro	AP2190	40.0	41.2 (12)	47.2*	46.9 (4)	55.2	43.7 (3)	25.3	35.9 (4)	32.2	--	--	3	32	1.7
AgriPro	AP2324	44.8*	47.3 (5)	49.5*	--	58.9	--	37.5*	--	33.4	--	--	4	32	1.5
AgriPro	Ex2292	43.2*	--	44.8	--	65.0*	--	28.4	--	34.6	--	--	2	30	1.3
Asgrow	A1525	38.7	41.6 (19)	42.5	43.2 (4)	62.0	49.2 (4)	24.2	41.7 (6)	26.0	--	--	-4	29	1.2
Asgrow	A1937	40.8	45.5 (29)	42.0	43.0 (5)	56.6	47.4 (9)	33.6*	48 (9)	31.1	--	--	-4	34	1.8
Asgrow	A2234	43.4*	46.4 (5)	46.0	--	68.6*	--	26.2	--	32.6	--	--	2	32	1.3
Callahan	6180 Brand	42.5	46.1 (18)	48.2*	46.2 (4)	63.9*	53.3 (4)	30.6	46.3 (6)	27.2	--	--	-4	32	1.4
Callahan	7260 Brand	45.4*	50.1 (12)	50.0*	49.1 (3)	69.6*	56.4 (3)	30.3	50.6 (5)	31.6	--	--	7	30	1.5
Callahan	8252X Brand	44.9*	56.5 (8)	49.9*	59.0 (2)	61.5	62.1 (2)	34.0*	58.4 (3)	34.3	--	--	7	32	1.6
Callahan	9191X Brand Blend	40.8	39.0 (5)	44.7	--	59.2	--	30.2	--	29.1	--	--	-1	31	1.3
Callahan	9222X Brand Blend	42.3	--	48.0*	--	62.1	--	30.7	--	28.6	--	--	2	32	1.6
Callahan	9233X Brand Blend	42.2	--	47.3*	--	63.2	--	29.4	--	28.6	--	--	4	33	1.4
Callahan	9270X Brand	46.5*	--	51.3*	--	64.9*	--	34.9*	--	34.8	--	--	5	31	1.3
Countrymark	FFR 190	42.0	39.9 (5)	43.3	--	57.7	--	27.5	--	39.3*	--	--	3	35	1.4
Countrymark	FFR 218	44.5*	--	50.3*	--	60.1	--	32.3*	--	35.1	--	--	6	32	1.4
Dairyland	DSR-070	34.6	33.7 (5)	39.8	--	53.1	--	26.1	--	19.2	--	--	-9	28	1.5
Dairyland	DSR-128	39.2	42.8 (18)	44.2	45.4 (4)	60.0	45.4 (4)	26.7	43.2 (6)	25.7	--	--	-4	29	1.4
Dairyland	DSR-135	36.6	40.6 (20)	38.6	43.5 (4)	54.2	42.6 (4)	31.5	42.9 (6)	21.9	--	--	-4	30	1.7
Dairyland	DSR-157	42.2	39.8 (5)	47.0*	--	56.7	--	33.1*	--	32.0	--	--	3	32	1.5
Dairyland	DSR-177	42.0	39.1 (5)	49.5*	--	61.4	--	28.1	--	28.9	--	--	0	30	1.5
Dairyland	DSR-247	44.6*	53.9 (8)	48.8*	55.3 (2)	59.1	56.9 (2)	29.9	55.4 (3)	40.7*	--	--	6	35	2.0
Dairyland	DSR-252	43.2*	52.6 (8)	51.5*	52.3 (2)	61.0	58.4 (2)	30.2	56.4 (3)	30.2	--	--	2	31	1.6
Dairyland	DSR-270	44.5*	47.6 (5)	49.2*	--	64.8*	--	30.7	--	33.2	--	--	8	30	1.5
Dairyland	DST-1104	38.5	--	42.4	--	58.9	--	26.9	--	25.5	--	--	-7	29	1.6
Dairyland	DST-1207	41.0	--	40.0	--	62.9	--	26.7	--	34.4	--	--	2	32	1.4
Dairyland	DST-1209	39.7	37.7 (5)	39.7	--	58.6	--	30.2	--	30.1	--	--	-2	29	1.3
Dairyland	DST-1303	43.4*	41.8 (5)	42.7	--	64.8*	--	34.9*	--	31.2	--	--	2	31	1.5
Dairyland	DST-2106	39.0	--	43.3	--	58.7	--	32.9*	--	21.2	--	--	-1	31	1.5
DeKalb-Pfizer	CX187	38.6	46.3 (10)	44.2	45.9 (2)	60.3	54.6 (2)	26.7	50.7 (3)	23.3	--	--	-3	30	1.4
DeKalb-Pfizer	CX265	43.8*	46.4 (13)	49.2*	45.7 (4)	53.5	48.9 (3)	38.0*	48 (5)	34.4	--	--	8	35	1.7
Diehl Fields	DF 101 Brand	40.3	45.9 (14)	43.1	--	63.1	--	27.6	--	27.5	--	--	-3	29	1.3
Diehl Fields	DF 101 Blend	39.4	--	42.2	45.7 (3)	59.9	57.4 (3)	23.6	44.6 (5)	32.0	--	--	-1	32	1.5
Diehl Fields	DF 201 Brand	44.9*	--	51.6*	--	61.5	--	31.5	--	35.0	--	--	6	34	2.4
Funk	G3197	39.5	43.6 (15)	44.1	45.9 (3)	61.3	52.5 (3)	25.6	43 (5)	26.8	--	--	-1	27	1.0
Glenn-Garno	1800	44.1*	48.8 (10)	49.5*	49.7 (2)	67.0*	59.4 (2)	33.3*	52 (3)	26.4	--	--	-3	30	1.5
Glenn-Garno	2500	44.1*	--	48.7*	--	62.3	--	31.9	--	33.4	--	--	5	31	1.7
Glenn-Garno	2800	42.2	45.6 (5)	47.0*	--	59.7	--	30.2	--	32.1	--	--	6	31	1.7
Glenn-Garno	2900	42.9	47.3 (5)	50.7*	--	53.4	--	32.7*	--	34.8	--	--	8	34	1.6
Golden Harvest	H-1170 Brand	41.8	46.9 (10)	48.2*	50.3 (2)	62.8	57.6 (2)	30.6	49.8 (3)	25.7	--	--	-3	30	1.2
Golden Harvest	H-1285 Brand	42.3	48.4 (15)	48.6*	47.5 (4)	60.2	48.0 (4)	29.3	52.1 (6)	31.1	--	--	7	33	1.7
Golden Harvest	H-1290 Brand	43.5*	--	49.8*	--	57.6	--	32.5*	--	34.0	--	--	9	38	1.9
Golden Harvest	X-278 Brand	44.2*	--	50.2*	--	63.1	--	32.5*	--	31.1	--	--	7	31	1.5
GLH	GL1999 Brand	41.6	46.3 (14)	43.2	43.8 (3)	58.4	49.8 (3)	30.9	47.2 (5)	34.0	--	--	4	35	2.0
GLH	GL2206 Brand	43.2*	46.2 (12)	46.4	46.4 (3)	62.2	47.2 (3)	27.9	47.5 (5)	36.3	--	--	6	36	1.6
GLH	GL2634 Brand	40.0	47.0 (21)	45.8	47.9 (5)	55.1	45.6 (7)	27.7	49.6 (8)	31.5	--	--	6	33	2.3
Greater Michigan	828	44.7*	--	57.3*	--	57.5	--	32.2	--	31.8	--	--	7	34	1.9
Jacques	J-181 Blend	43.0*	39.4 (5)	47.1*	--	66.9*	--	31.1	--	27.1	--	--	-3	32	1.3
Jacques	J-231	42.3	45.1 (8)	46.5	--	55.6	--	31.6	--	35.6	--	--	5	34	1.9
Kaiser/Estech	KE 156	43.5*	50.8 (10)	52.8*	51.4 (2)	65.5*	60.3 (2)	29.3	57 (3)	26.4	--	--	-3	31	1.2
Kaiser/Estech	KE 212	41.5	47.3 (8)	49.1*	48.0 (2)	55.4	55.2 (2)	30.9	47.2 (3)	30.8	--	--	4	33	1.6
Kaiser/Estech	KE 266	44.7*	--	52.4*	--	50.5	--	32.6*	--	43.4*	--	--	8	33	2.0
	<b>Test Mean</b>	<b>41.89</b>		<b>46.25</b>		<b>59.10</b>		<b>30.51</b>		<b>31.77</b>			<b>3</b>	<b>32.2</b>	<b>1.63</b>
	<b>LSD (.05)</b>	<b>5.38</b>		<b>10.80</b>		<b>7.72</b>		<b>7.37</b>		<b>6.52</b>			<b>2.5</b>	<b>2.8</b>	<b>0.50</b>

† Check variety used to calculate deviation from standard maturity.  
 \* Not significantly different from the highest yield within that column.

(cont'd)



TABLE 4. (Continued) Central Michigan.

Brand	Entry	Yield (bu/A)										Maturity (days)	Height (in)	Lodging Score					
		Entire Central Region		South Central (Ingham Co.)		Central (Saginaw Co.)		East Central (Sanilac Co.)		West Central (Montcalm Co.)									
		1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)	1988	Avg. (n)								
Kaiser/Estech	KE 258 Brand	44.9*	--	--	52.0*	--	--	62.4	--	--	31.8	--	--	33.4	--	--	7	30	1.6
Kaiser/Estech	KE 298 Brand	41.7	--	--	37.8	--	--	54.3	--	--	36.4*	--	--	38.3*	--	--	12	34	1.8
Kaiser/Estech	Exp. 111009	42.4	--	--	44.7	--	--	57.8	--	--	32.4*	--	--	34.7	--	--	5	32	1.5
Kaiser/Estech	Exp. 510006	41.1	--	--	48.8*	--	--	54.3	--	--	28.7	--	--	32.8	--	--	1	36	1.7
King Grain	KG81	40.3	44.4	(13)	46.0	42.2	(3)	56.9	49.9	(3)	28.1	47.7	(5)	30.3	--	--	2	32	1.4
King Grain	KG91	44.9*	51.2	(8)	51.4*	52.3	(2)	55.1	56.6	(2)	36.3*	51.7	(3)	36.9	--	--	5	31	1.9
King Grain	PS90	40.6	44.6	(19)	38.0	43.9	(5)	55.9	45.1	(6)	31.9	45.8	(7)	36.5	--	--	2	35	1.7
King Grain	KG 4615	43.5*	51.1	(8)	49.0*	53.9	(2)	54.5	48.7	(2)	27.6	53.5	(3)	43.0*	--	--	14	38	2.4
King Grain	KG 100	43.1*	--	--	45.4	--	--	58.5	--	--	33.5*	--	--	35.0	--	--	9	35	1.5
Lakeside States	LSI 116 Brand	41.6	45.1	(15)	47.3*	48.0	(3)	56.4	46.2	(3)	30.7	47.5	(5)	32.1	--	--	4	35	1.4
Lakeside States	LSI 125 Brand	40.5	--	--	43.4	--	--	56.8	--	--	31.2	--	--	30.6	--	--	3	36	1.8
Lakeside States	LSI1283 Brand	38.6	35.1	(5)	40.7	--	--	56.6	--	--	26.3	--	--	30.7	--	--	-2	33	1.6
Lakeside States	LSI2182 Brand	42.0	--	--	45.8	--	--	55.1	--	--	33.3*	--	--	33.8	--	--	3	33	1.7
Lakeside States	LSI2283 Brand	41.1	--	--	41.7	--	--	53.4	--	--	34.7*	--	--	34.6	--	--	3	34	1.5
Lakeside States	LSI2382 Brand	41.4	--	--	44.1	--	--	61.3	--	--	26.2	--	--	34.0	--	--	3	33	1.6
Lakeside States	LSI3281 Brand	45.7*	--	--	45.7	--	--	62.9	--	--	33.7*	--	--	40.8*	--	--	10	33	1.6
Maumee Valley	Eagle Brand	43.3*	50.9	(8)	48.1*	46.8	(2)	60.9	61.2	(2)	30.2	52.3	(3)	33.9	--	--	1	32	1.9
Maumee Valley	Enterprise Brand	42.8	46.1	(10)	47.4*	40.3	(4)	50.9	50.4	(2)	33.5*	53.3	(3)	39.3*	--	--	7	34	1.6
Maumee Valley	Sabre Brand	44.4*	55.7	(8)	48.5*	56.8	(2)	65.7*	63.7	(2)	31.3	57.5	(3)	31.9	--	--	6	32	1.5
Maumee Valley	Warrior Brand	43.0*	50.4	(10)	47.4*	47.0	(4)	57.0	58.6	(2)	32.0	54.2	(3)	35.8	--	--	10	34	1.8
Northrup King	B152	38.0	42.8	(19)	40.4	44.5	(4)	62.7	48.7	(5)	24.1	41.7	(6)	24.8	--	--	-3	27	1.3
Northrup King	S15-50	42.8	43.0	(19)	50.1*	47.3	(4)	57.4	46.8	(4)	31.4	42.7	(6)	32.4	--	--	-1	35	1.4
Northrup King	S23-12	45.1*	48.8	(12)	51.3*	50.0	(3)	63.6	55.2	(3)	32.9*	47.5	(5)	32.7	--	--	2	34	1.2
Pioneer	9161	43.6*	40.4	(5)	51.1*	--	--	64.2*	--	--	31.1	--	--	28.0	--	--	-3	31	1.4
Pioneer	9202	41.1	49.1	(8)	47.3*	50.6	(2)	58.7	54.8	(2)	29.6	51.1	(3)	28.6	--	--	0	29	1.4
Pioneer	9271	44.1*	49.4	(14)	45.2	48.0	(5)	66.0*	55.5	(4)	30.9	48.6	(4)	34.4	--	--	5	32	1.3
Pioneer	9272	45.8*	--	--	47.0*	--	--	71.4*	--	--	30.6	--	--	34.3	--	--	4	32	1.5
Pioneer	9293	45.6*	--	--	53.5*	--	--	63.9*	--	--	32.7*	--	--	32.4	--	--	9	30	1.7
ProSoy	PS138	39.3	47.9	(10)	41.9	47.4	(2)	59.8	57.5	(2)	27.5	51.6	(3)	28.0	--	--	-3	29	1.3
ProSoy	PS215	47.0*	--	--	57.7*	--	--	65.2*	--	--	31.9	--	--	33.2	--	--	4	33	1.7
ProSoy	PS225	45.4*	--	--	54.5*	--	--	58.7	--	--	32.1	--	--	36.2	--	--	5	36	2.0
ProSoy	PS246A	44.1*	53.6	(8)	47.6*	52.2	(2)	58.0	56.5	(2)	33.9*	58.1	(3)	36.9*	--	--	6	34	1.9
Rupp	RS2308	44.8*	53.2	(8)	46.2	52.4	(2)	63.9*	60.5	(2)	34.5*	55.2	(3)	34.5	--	--	2	33	1.6
Rupp	RS2323	40.7	--	--	42.0	--	--	60.4	--	--	26.5	--	--	33.9	--	--	3	31	1.5
Rupp	RS2460P	46.8*	47.1	(19)	50.7*	49.5	(5)	63.4	47.6	(6)	36.6*	46.6	(7)	36.6	--	--	7	34	1.9
J.M. Schultz	JMS 2083 Brand	45.1*	--	--	50.8*	--	--	64.2*	--	--	33.0*	--	--	32.3	--	--	3	34	1.6
J.M. Schultz	JMS 2288 Brand	48.3*	--	--	55.8*	--	--	62.8	--	--	39.7*	--	--	34.9	--	--	6	33	1.9
J.M. Schultz	JMS 2382 Brand	42.0	--	--	46.9	--	--	57.2	--	--	35.3*	--	--	28.5	--	--	7	34	1.7
Seedex	Seedex 190	39.1	37.2	(5)	39.1	--	--	62.3	--	--	30.2	--	--	24.7	--	--	-3	31	1.4
Seedex	Seedex 253	44.1*	--	--	48.8*	--	--	64.5*	--	--	30.8	--	--	32.4	--	--	1	33	1.7
Seedex	Seedex 260	48.2*	--	--	57.3*	--	--	66.6*	--	--	32.1	--	--	36.9*	--	--	7	34	1.7
Stine	1820 Brand	42.2	40.0	(5)	45.8	--	--	58.6	--	--	32.0	--	--	32.6	--	--	-2	32	1.5
Stine	2750 Brand	41.8	51.7	(8)	42.6	50.7	(2)	64.9*	60.7	(2)	26.2	52.3	(3)	33.6	--	--	6	32	1.6
Stine	2960 Brand	43.0*	--	--	47.1*	--	--	64.8*	--	--	30.0	--	--	30.1	--	--	5	30	1.4
Terra	Decathlon Brand	42.5	51.4	(8)	47.7*	49.3	(2)	63.3	57.2	(2)	30.0	56.4	(3)	28.9	--	--	3	31	1.8
Terra	Hurdle Brand	40.9	43.0	(12)	45.8	42.5	(3)	58.0	46.8	(3)	29.4	43.7	(5)	30.3	--	--	4	33	1.9
Terra	Javelin Brand	43.1*	--	--	50.5*	--	--	56.3	--	--	32.1	--	--	33.5	--	--	5	33	1.7
Terra	Medalist Brand	44.8*	--	--	54.9*	--	--	56.3	--	--	33.0*	--	--	34.9	--	--	5	34	1.6
Terra	Olympian Brand	43.9*	47.1	(9)	50.8*	41.6	(3)	55.5	50.7	(2)	34.0*	54.2	(3)	35.3	--	--	8	33	1.9
Terra	Runner III Brand	40.2	38.2	(5)	46.4	--	--	61.5	--	--	26.0	--	--	27.0	--	--	-3	30	1.4
Terra	Sprint Brand	42.5	50.5	(9)	53.6*	50.7	(3)	52.6	52.2	(2)	35.3*	56.4	(3)	28.5	--	--	7	33	2.1
Terra	Exp. 275 Brand	44.3*	53.5	(8)	45.7	50.7	(2)	60.2	58.1	(2)	32.0	57.1	(3)	39.2*	--	--	9	33	1.7
	<b>Test Mean</b>	41.89			46.25			59.10			30.51			31.77			3	32.2	1.63
	<b>CV</b>	9.3%			14.0%			8.0%			14.6%			12.4%			6.8%	6.3%	22.1%
	<b>LSD(.05)</b>	5.38			10.80			7.72			7.37			6.52			2.5	2.8	0.50

\* Not significantly different from the highest yield within that column.



**TABLE 5. Saginaw Bay Area (Huron Co.)**

Brand	Entry	Yield (bu/A)			Maturity (days)	Height (in)	Lodging Score
		1988	Avg.	(n)			
Public	BSR 101	26.8	40.9	(4)	8	27	1.0
Public	Corsoy 79	29.0	41.2	(5)	5	27	1.0
Public	Dassel	26.8	38.7	(5)	-4	24	1.0
Public	Dawson	20.4	38.9	(7)	-5	23	1.0
Public	Elgin 87	30.2	--	--	8	24	1.0
Public	Glenwood	23.8	39.6	(5)	-5	23	1.0
Public	Hardin	24.5	39.4	(5)	1	26	1.0
Public	Hodgson 78 †	24.8	39.6	(6)	9-20	25	1.0
Public	Ozzie	25.5	35.1	(6)	-7	21	1.0
Public	Sibley	30.3	39.6	(3)	4	24	1.0
Public	Simpson	21.3	39.0	(6)	-5	22	1.0
Public	Weber 84	32.9*	39.6	(4)	5	25	1.0
AgriPro	AP1776	33.9*	45.4	(2)	1	23	1.0
AgriPro	AP1989	31.5*	53.4	(2)	6	25	1.0
Asgrow	A1525	23.6	36.4	(4)	0	22	1.0
Asgrow	A1937	32.4*	43.0	(5)	4	26	1.0
Callahan	6180 Brand	27.6	42.0	(3)	1	25	1.0
Callahan	9191X Brand Blend	31.9*	--	--	3	27	1.0
Countrymark	FFR 190	31.5*	--	--	6	31	1.0
Dairyland	DSR-070	30.1	--	--	-6	23	1.0
Dairyland	DSR-128	27.2	40.6	(3)	2	25	1.0
Dairyland	DSR-135	26.9	37.6	(5)	3	26	1.0
Dairyland	DSR-157	30.0	--	--	3	28	1.0
Dairyland	DSR-177	27.7	--	--	5	24	1.0
Dairyland	DST-1104	23.0	--	--	-5	26	1.0
Dairyland	DST-1209	30.1	--	--	2	27	1.0
Dairyland	DST-1303	35.4*	--	--	6	27	1.0
DeKalb-Pfizer	CX187	23.6	43.3	(2)	1	23	1.0
Diehl Fields	DF 101 Brand	24.3	41.5	(2)	1	23	1.0
Funk	G3197	28.0	39.0	(3)	3	26	1.0
Glenn-Garno	1800	27.6	44.0	(2)	2	24	1.0
Golden Harvest	H-1170 Brand	21.3	39.0	(2)	2	24	1.0
GLH	GL1999 Brand	33.1*	48.7	(2)	7	29	1.0
Jacques	J-181 Blend	25.0	--	--	1	26	1.0
Kaiser/Estech	KE 156	25.8	43.7	(2)	-1	24	1.0
Kaiser/Estech	Exp. 111009	27.4	--	--	8	23	1.0
Kaiser/Estech	Exp. 510006	31.0	--	--	5	28	1.0
King Grain	KG81	31.6*	--	--	3	26	1.0
Lakeside States	LSI 116 Brand	39.3*	41.6	(3)	9	29	1.0
Lakeside States	LSI1283 Brand	21.1	--	--	5	22	1.0
Northrup King	B152	29.6	38.7	(3)	1	22	1.0
Northrup King	S15-50	26.4	38.3	(4)	2	25	1.0
Pioneer	9161	27.7	--	--	3	26	1.0
ProSoy	PS138	19.8	43.3	(2)	-1	23	1.0
Seedex	Seedex 190	29.7	--	--	1	26	1.0
Stine	Stine 1820 Brand	30.8	--	--	2	26	1.0
Terra	Runner III Brand	30.3	--	--	2	25	1.0
	<b>Test Mean</b>	27.91			1.9	24.9	1.00
	<b>CV</b>	17.2%			8.5%	10.3%	0.0%
	<b>LSD(.05)</b>	8.13			3.2	4.4	N/A

† Check variety used to calculate deviation from standard maturity.

\* Not significantly different from the highest yield within that column.





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