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1987 Michigan Soybean Performance ReportMichigan State University Extension ServiceM.L. Vitosh, T. G. Isleib, J.L. Lockwood, J.F. Boyse, L.Rood-Kao, Crop and SoilSciencesIssued January 198812 pages

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1987 Michigan Soybean Performance Report

Extension Bulletin E-1206 January 1988

By M. L. Vitosh, T. G. Isleib, J. L. Lockwood, J. F. Boyse and L. R. Kao Department of Crop and Soil Sciences Department of Botany and Plant Pathology

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), and East Central Michigan (Sanilac and Macomb Counties). 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 Tables 2 and 5. Seed of entries was planted in 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.

Evaluation of 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.

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

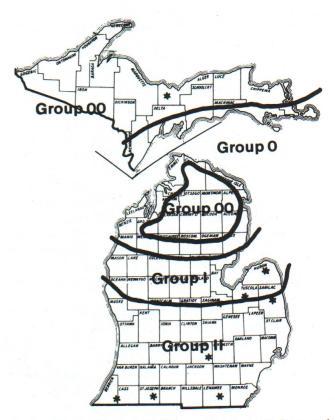
LODGING—Lodging rates reflect the erectness of the plants before harvest. Ratings are based on the following scale:

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 1987 soybean variety trials. Values given are the averages of all replications harvested at each location. Extremely dry weather in June and July adversely affected the plots in Huron county.



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

1. Almost all plants erect

60¢

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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, 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 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—E-1206). Where problems with this disease are experienced one of the varieties with lower disease ratings might be beneficial.

It is often beneficial for 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."

Use of 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 1987 yields and multiple-year average yields from all tests since 1975 are given. Maturity, height (in inches), and lodging scores are the 1987 regional averages. Maturity is expressed as + or – days when compared with the check variety. For 1987 yield data, all starred entries designate yields not significantly different from the highest yield 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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County	Lenawee	St. Joseph	Berrien	Ingham	Saginaw	Macomb	Sanilac	Huron
CES Director/ Agent	N. R. Bless G. A. Wuethrich	F. J. Henningsen M. J. Kaercher	J. E. Niebauer J. Davidhizar	M. M. Preston D. R. Batchelor	Jim Thews S. S. Poindexter	J. L. Voorheis L. J. Jess	R. C. Weber M. Nagelkirk	R. A. Johnson J. P. LeCureux
Farmer Cooperator	David Woods	B. Marantette J. Sheppard	B. Anderson		C. Gosen	R. A. Greenia	K. Pritchett	J. Jurgess
Address	Woods Seed Farm 10992 Holloway Rd. Britton, Ml	MFI 25660 Simpson Rd. Mendon, MI	Andrews University Berrien Springs, MI	MSU Campus East Lansing, MI	8735 Swan Creek Rd. Saginaw, MI	Greenia Bros. Farm 1395 Kronner Rd. Richmond, MI	2985 S. Sandusky Rd. Sandusky, MI	4300 Sand Beach Rd. Bad Axe, MI
Soil Type	Lenawee silty clay loam	Elston sandy loan	Abscota sandy loam	Capac loam	Pella silt loam and Kibbie fine sandy loam	Parkhill loam	Capac loam and fine sandy loam	Shebeon loam and Kilmanagh loam
Soil Management								
Group	1.5c	4a	L-4a	2.5b	2.5c-s and 2.5b-s	2.5c	2.5b	2.5b-d and 2.5c
Previous Crop	Wheat	Corn	Corn	Corn	Corn	Barley	Sugarbeets	Corn
Fertilizer	250# 0-0-60	200# 5-14-24 with 5% ZN	None	200# 6-24-24	200# 5-20-20	200# 6-24-24	290# 8-17-34	200# 6-24-24
Planting Date	5/7/87	5/25/87	5/26/87	5/11/87	5/13/87	5/21/87	5/21/87	5/27/87
Harvest Date	10/1/87	10/3/87	10/13/87	10/10/87	10/9/87	10/15/87	10/14/87	10/16/87
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TABLE 1. Variety trial information.

TABLE 2.Performance Summary for Varieties Entered in the Michigan Trials in 1987. 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.

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Brand / Entry	MG	Туре	Yield	(n)	Dev.	Yield	(n)	Dev.	Date	H78		Date			South.	Central
Public																
Amcor	п	Rps1a	44.0	(21)	-0.1	45.7	(21)	0.3	9-28	12	5	10-7	12	4	3.1	3.0
Beeson 80	п	Rps1c	36.0	(21)	-8.1 *	37.1	(23)	-7.5 *L	9-26	10	3	10-7	11	4	2.0	2.2
BSR 101	I	Rps1a	48.6	(15)	2.3	46.7	(18)	2.0 *	9-20	4	-3	10-3	8	-1	1.7	2.1
BSR 201	П	Rps1b	48.9	(18)	1.5	47.0	(16)	1.1	9-25	10	3	10-6	11	2	2.7	3.0
Century	п	Rps1a	46.0	(22)	1.6	44.8	(24)	0.5	9-27	10	4	10-7	11	4	1.9	2.1
Century 84	п	Rpslc	46.7	(13)	1.4	48.3	(13)	2.7 *	9-26	11	4	10-7	13	4	1.5	1.9
Corsoy	Ш	None	42.7	(30)	0.5	40.9	(33)	-0.5 L	9-23	6	0	10-1	6	0	2.5	2.3
Corsoy 79	П	Rps1c	43.5	(28)	0.4	45.2	(35)	1.6 *	9-24	7	0	10-3	7	0	2.6	2.5
Dassel	0	Rps6	-	-		41.3	(11)	-4.9				9-23	-2	-10		1.3
Dawson	0	Rps1a	-	-	-	42.2	(23)	-2.1 L		-		9-21	-5	-13	-	1.7
Elgin	п	None	47.8	(19)	2.9 *	48.2	(20)	3.6 *	9-23	8	0	10-3	7	0	2.2	2.2
Gnome 85	ш	Rps1k	48.3	(11)	-0.2	43.4	(7)	-0.4	9-25	11	5	10-6	14	5	1.4	1.5
Hack	П	Rps1a	48.2	(14)	2.2	46.8	(14)	1.5	9-25	10	3	10-5	11	2	1.6	1.7
Hardin	I	Rpsla	44.3	(21)	0.8	47.3	(27)	2.8 *	9-21	4	-2	10-1	5	-2	2.4	2.4
Hobbit	ш	None	44.3	(19)	2.5	48.7	(4)	3.4	9-29	14	7	10-10	15	5	1.2	1.5
Hodgson 78	I	Rpsla	41.1	(30)	-1.6	42.8	(38)	-0.7	9-17	0	-6	9-26	0	-7	2.0	1.8
Hoyt	п	Rps1a	51.2	(11)	3.3	44.3	(12)	-1.6	9-25	12	5	10-6	12	3	1.6	1.6
Keller	П	Rps1c, Rps	3 44.0	(12)	-0.9	46.5	(12)	0.2	9-26	11	3	10-6	11	3	2.3	2.5
Miami	п	Rps1c, Rps		(13)	-4.0	42.1	(13)	-3.5 *L	9-21	6	-2	10-1	7	-2	2.0	2.1
Nebsoy	п	Rpsla	43.7	(22)	-0.7	43.4	(24)	-1.0	9-23	7	0	10-4	8	0	1.7	1.8
Ozzie	0	Rpsla	_	_	_	39.3	(18)	-4.2 *	_	-		9-19	-8	-15		1.2
Pella	Ш	Rps1a	46.5	(17)	3.8 H	49.0	(17)	3.8 *	9-30	13	6	10-8	12	5	1.9	2.0
Preston	П	None	51.4	(10)	3.6 *	47.5	(11)	1.8	9-26	13	6	10-6	12	4	2.4	2.5
Sherman	Ш	None	65.2	(4)	13.6 *	-	_	-	9-30	25	16	-		_	3.5	-
Sibley	I	Rps1a	49.0	(12)	1.9	44.6	(15)	-1.1	9-14	1	-6	9-25	0	-8	2.3	2.2
														(cont'd		

* Statistically significant deviation (P<.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 1987. 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.

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Frand / Entry	MG	Res. Type	Yield	uthern (n)	Dev.	Yield	entral (n)	Dev.		H78		Date	entral H78		South.	Centra
Simpson	0	Rps1a	_	_	_	39.5	(16)	-3.4 *				9-22	-4	-11		1.4
Vickery	п	Rps1c	43.8	(22)	-0.6	44.1	(25)	0.2	9-22	6	-1	10-2	6	-1	3.1	2.9
Weber 84	ĩ	Rpsla	41.7	(17)	-2.5	42.4	(20)	-1.5	9-21	5	-3	9-30	5	-3	2.7	2.4
Wells II	ñ	Rps1c	42.1	(24)	-2.2 *	41.8	(26)	-1.7 L	9-22	5	-2	10-2	6	-1	1.7	1.6
Zane	ш	None	48.6	(11)	3.7	47.5	(11)	1.6	9-30	14	6	10-2	14	5	2.4	2.4
	ш	NOIC	-0.0	(11)	5.7	47.5	(11)	1.0	9-50	14	0	10-0	14	5	2.4	2.7
gripro AP1776	I	Rpsla	_	_		56.3	(5)	-1.8	_			9-18	2	-8		1.2
AP2021	п	Rps1a	-			48.7	(8)	1.3	_			9-28	5	-4		2.2
AP2190	п	-	44.9	(11)	0.0	41.8	(8)	1.1	9-24	8	0	10-5	9	0	2.1	1.6
AP3132	m	Rps1a None	51.9		5.1		(0)		9-24	14	6		-	-	2.1	1.0
				(7)	2.0 *	45.7		1.7	9-26	9	2		8	2		2.3
HP2530	п	Rpsla	46.5	(18)			(10)								2.1	
Ex 1989	I	Rps1c	-		-	64.2	(5)	6.2	0.16			9-26	10	0		2.8
Ex 2323	П	None	51.7	(4)	0.1		-		9-16	11	2			-	1.9	-
Ex 2324	п	None	54.7	(4)	3.2	-	-		9-17	12	3	-		-	1.9	-
sgrow																
A0949	0	Rps1c			-	41.8	(10)	-5.0 *	-			9-22	-2	-10		1.8
A1525	I	Rps1a	43.4	(3)	-2.2 *	43.7	(14)	-1.4	9-27	1	-8	9-26	1	-8	1.1	1.3
A1937	I	Rps1a	43.3	(20)	0.1	46.9	(24)	2.1	9-18	2	-5	9-28	3	-5	2.1	2.0
A2187	Π	Rps1a	44.1	(11)	-0.8	42.9	(5)	-0.1	9-21	5	-3	9-30	4	-4	1.7	1.4
A2234	п	Rps1k	56.2	(4)	4.7	-	-		9-12	7	-2			-	1.4	-
A2943	П	Rps1a	49.5	(15)	5.7 *	47.5	(4)	2.2	10-2	15	7	10-11	15	6	1.9	2.4
allahan																
1250 Brand	п	None	45.7	(17)	3.0	50.2	(15)	4.5 *	9-29	13	5	10-9	14	5	2.2	2.2
6180 Brand	ĩ	None	45.5	(3)	-0.1	48.6	(13)	2.3	9-27	2	-7	9-27	3	-6	1.6	1.3
6262 Brand	п	Rpsla	42.4	(8)	-0.2	49.3	(11)	3.4 *	9-29	9	2	10-6	12	3	1.9	2.1
7260X Brand	п	None	52.3	(7)	5.6	52.4	(8)	5.0 *	9-25	12	5	10-0	11	3		
7200X Brand 7299X Brand	п	None	60.7	(4)	9.2	63.6	(4)	5.5 *	9-23	12	10	10-5	15	6	1.8 3.4	2.4 2.9
000011 0																
8200X Brand	п	None	-		-	61.8	(4)	3.7	-			9-20	4	-5		1.4
8220X Brand	Π	Rps1a	-		-	59.7	(4)	1.6	-	-		9-23	8	-1		2.9
8244X Brd Ble		None	56.8	(4)	5.3	67.5	(4)	9.4 *	9-19	14	5	9-27	12	3	2.5	2.6
8252X Brand	Π	None	62.9	(4)	11.4	68.0	(4)	9.9 *	9-21	16	7	9-28	13	4	2.4	2.5
8266X Brd Ble	nd II	Rps1a, None	e 58.1	(4)	6.6	64.0	(4)	5.9	9-19	14	5	9-27	12	3	2.3	2.6
airyland																
DSR-128	I	Rps1c	45.8	(3)	0.3	45.1	(13)	-1.2 L	9-26	0	-9	9-24	0	-9	1.0	1.3
DSR-135	I	Rps1a	45.1	(3)	-0.5	42.6	(15)	-1.6	9-27	2	-7	9-25	ŏ	-8	1.8	1.8
DSR-155	I	Rps1c	44.0	(4)	-7.5	52.0	(5)	-6.1 *	9-6	1	-8	9-17	1	-8	1.5	1.2
DSR-171	I	None	44.9	(22)	1.2	45.2	(26)	0.2	9-22	6	-1	10-1	6	-2	2.2	2.3
DSR-204	Π	Rps1c, None		(4)	-3.8	52.7	(4)	-5.5	9-11	6	-3	9-21	6	-3	1.8	2.3
DSR-252	п	None	56.6	(4)	5.0	61.9	(4)	3.8	9-17	12	3	9-25	10	1	1.9	2.0
DSR-252	п	None	61.4	(4)	9.8	-	(4)	5.0	9-17	17	8	9-23			1.9	
DSR-287	п	None	50.0		5.1 *	49.4	(2)	3.8	10-1		7	10 10	15	-		20
DSR-287 DSR-297	Ш			(11)			(3)			15		10-10		6	2.3	2.8
		Rps1c	47.3	(11)	2.4	45.2	(3)	-0.3	10-3	17	9	10-12		8	2.4	2.6
DSR-304	Ш	None	63.0	(4)	11.5 *	-	-		9-29	24	15			-	3.0	-
DSR-317	Ш	None	47.7	(11)	2.8	38.9	(3)	-6.6	10-4	18	10	10-12	17	8	2.9	2.7
DSR-335	ш	None	58.7	(4)	7.1	-	-		9-30	25	16			_	3.7	_
DST-2104	п	None	57.7	(4)	6.2	57.6	(4)	-0.5	9-17	12	3	9-26	10	1	2.2	2.5
DST-2207	Π	Rps1c	58.0	(4)	6.4	63.2	(4)	5.1 *	9-17	12	3	9-25	10	1	2.0	2.5
DST-2308	Π	None	57.3	(4)	5.7	-	-	-	9-20	15	6			-	1.3	-
	п	None	65.3	(4)	13.8 *		_		9-23	18	9				3.5	_
DST-2311	11	INONC	05.5	(-)	10.0				1-45	10	2				5.5	

* Statistically significant deviation (P<.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 1987. 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.

CX283 II CX326 III Diehl Fields I DF-101 Brand I Funk G3197 I Garst 8011 I 8011 I I 8011 I I Solden Harvest H-1170 Brand I H-1170 Brand I I H-1233 Brand II H-1265 Brand II H-1285 Brand II I I H-1285 Brand II I I Glenn-Garno 1 800 I 2800 II 2800 II I GL1900 Brand I GL2006 Brand I GL1900 Brand I GL20206 Brand II GL2037 Brand II GL2634 Brand II GSF-265 II GSF-265 II GSF-280 II II SF-265 II GSF-280 II	None Rps1c None Rps1c None Rps1c, None Rps1a None None	42.9 46.8 52.7 48.1 50.5 47.4	(n) 	Dev. 0.2 3.0 5.9 1.3 2.0 -4.2	Yield 57.0 47.6 49.0 - 50.8 46.8	(5) (9) (4) - (9)	-1.1 0.2 3.6 * 2.2	Date 10-3 9-29 9-30 9-16	HH78 9 12 18			4 12 13	-6 3 4 -	Lodging South. 2.2 2.6 1.9	
CX187 I CX265 II CX283 II CX326 III Diehl Fields JF-101 Brand DF-101 Brand I Funk G3197 Garst 8011 8011 I 8101 I 8201 II Golden Harvest H-1170 Brand H-1233 Brand II H-1265 Brand II H-1265 Brand II H-1285 Brand II Glenn-Garno 1800 1800 I 2900 II Great Lakes Hybrid GL1900 Brand GL206 Brand I GL206 Brand II GL2634 Brand II Gries GSF-265 GSF-280 II Jacques J-201 J-231 II Kaiser / Estech 156 156 I 212 II 266 II	Rps1c None Rps1c None Rps1c, None Rps1a None None	42.9 46.8 52.7 48.1 50.5 47.4 e 44.7 53.0	- (6) (15) (7) (7) (5) (4) (4)		47.6 49.0 - 50.8	(9) (4) - (9)	0.2 3.6 * 	9-29 9-30	12	25	10-5 10-9	12 13	3 4	2.2 2.6	2.3 2.7
CX265 II CX283 II CX326 III Diehl Fields DF-101 Brand I Funk G3197 I Garst 8011 I 8011 I I 8011 I I 8011 I I 8011 I I 8001 I I 8001 I I 8001 I I H-1170 Brand I H-1233 Brand II H-1235 Brand II H-1265 Brand II H-1265 Brand II H-1265 Brand II Glenn-Garno 1800 I 2900 II Goldon Harvest I GL2006 Brand I GL2006 Brand II GL2006 Brand II GL2034 Brand II Gries GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II <td>Rps1c None Rps1c None Rps1c, None Rps1a None None</td> <td>42.9 46.8 52.7 48.1 50.5 47.4 e 44.7 53.0</td> <td>(15) (7) (7) (5) (4) (4)</td> <td>3.0 5.9 1.3 2.0 -4.2</td> <td>47.6 49.0 - 50.8</td> <td>(9) (4) - (9)</td> <td>0.2 3.6 * </td> <td>9-29 9-30</td> <td>12</td> <td>25</td> <td>10-5 10-9</td> <td>12 13</td> <td>3 4</td> <td>2.2 2.6</td> <td>2.3 2.7</td>	Rps1c None Rps1c None Rps1c, None Rps1a None None	42.9 46.8 52.7 48.1 50.5 47.4 e 44.7 53.0	(15) (7) (7) (5) (4) (4)	3.0 5.9 1.3 2.0 -4.2	47.6 49.0 - 50.8	(9) (4) - (9)	0.2 3.6 * 	9-29 9-30	12	25	10-5 10-9	12 13	3 4	2.2 2.6	2.3 2.7
CX223 II CX326 III Diehl Fields I DF-101 Brand I Funk G3197 I Garst 8011 I 8101 I I 8201 II I Golden Harvest H-1170 Brand I H-1233 Brand II H-1235 Brand II H-1265 Brand II H-1285 Brand II Glenn-Garno 1800 I 2800 II 2900 II GL1900 Brand I GL206 Brand II GL206 Brand II GL206 Brand II GL2537 Brand II GL2064 Brand II GSF-265 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II	None Rps1c None Rps1c, None Rps1a None None	46.8 52.7 48.1 50.5 47.4 e 44.7 53.0	(15) (7) (7) (5) (4) (4)	3.0 5.9 1.3 2.0 -4.2	49.0 - 50.8	(4) - (9)	3.6 *	9-29 9-30	12	5	10-9	13	4	2.6	2.7
CX326 III Diehl Fields DF-101 Brand I Funk G3197 I Garst 8011 I 8011 I 8101 I 8201 II Golden Harvest H-1170 Brand I H-1233 Brand II H-1233 Brand II H-1265 Brand II H-1285 Brand II Glenn-Garno I 1800 I 2900 II Gil 1900 Brand I GL206 Brand II GL206 Brand II GL20634 Brand II GIA2634 Brand II Gries GSF-265 GSF-280 II Jacques J-201 J-231 II Kaiser / Estech 156 156 I 212 II 266 II	None None Rps1c, None Rps1a None None	52.7 48.1 50.5 47.4 e 44.7 53.0	(7) (7) (5) (4) (4)	5.9 1.3 2.0 -4.2	- 50.8	- (9)	-	9-30							
Diehl Fields DF-101 Brand I Funk G3197 I Garst 8011 I 8011 I 8101 I 8201 I Golden Harvest H-1170 Brand I H-1233 Brand I H-1235 Brand II H-1265 Brand II H-1285 Brand II Glenn-Garno I 1800 I 2800 II 2900 II GL1900 Brand I GL2206 Brand II GL2537 Brand II GL2634 Brand II GSF-265 II GSF-280 II Jacques J-201 J-201 II J-231 II Kaiser / Estech 156 156 I 212 II 266 II	None Rps1c, None Rps1a None None	48.1 50.5 47.4 e 44.7 53.0	(7) (5) (4) (4)	1.3 2.0 -4.2	50.8	(9)			18	10	-		-	1.9	-
DF-101 Brand I Funk G3197 I Garst 8011 I 8011 I I 8101 I I 8201 II I Golden Harvest I I H-1170 Brand I I H-1233 Brand II I H-1265 Brand II I H-1285 Brand II I Glenn-Garno 1800 I 1800 I 2800 II Great Lakes Hybrid GL1900 Brand I GL206 Brand II GL2537 Brand II GL2634 Brand II GSF-265 II GSF-265 II GSF-265 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II 16 172 11	None Rps1c, None Rps1a None None	50.5 47.4 e 44.7 53.0	(5) (4) (4)	2.0 -4.2			2.2	9-16							
Funk G3197 I Garst 8011 I 8011 I I 8101 I I 8201 II Golden Harvest I H-1170 Brand I H-1233 Brand II H-1265 Brand II H-1285 Brand II H-1285 Brand II Glenn-Garno 1800 1800 I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand GL2066 Brand II GL2206 Brand II GL2634 Brand II GSF-265 II GSF-265 II GSF-280 II Jacques J-201 J-201 II J-231 II Kaiser / Estech 156 156 I 212 II 266 II	None Rps1c, None Rps1a None None	50.5 47.4 e 44.7 53.0	(5) (4) (4)	2.0 -4.2			2.2	9-10		-4	9-26	4	-5	1.6	1.5
G3197 I Garst 8011 II 8101 I 8101 I 8201 II I 1 Golden Harvest H-1170 Brand I H-1233 Brand II H-1233 Brand II H-1265 Brand II H-1285 Brand II Glenn-Garno 1800 I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand I GL2206 Brand II GL2206 Brand II GL2634 Brand II GL2634 Brand II GSF-265 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II 1266 II II 1266 II	None Rps1c, None Rps1a None None	47.4 e 44.7 53.0	(4) (4)	-4.2	46.8				4	-4	9-20	4	-5	1.0	1.5
Garst 8011 II 8101 I 8201 II Golden Harvest H-1170 Brand I H-1233 Brand II H-1265 Brand II H-1265 Brand II H-1285 Brand II Glenn-Garno 1800 I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand I GL206 Brand II GL206 Brand II GL206 Brand II GL2634 Brand II Gries GSF-150 II GSF-265 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II	None Rps1c, None Rps1a None None	47.4 e 44.7 53.0	(4) (4)	-4.2	40.8	(10)	0.1	0.00	7	-1	9-28	4	-4	1.4	1.5
8011 II 8101 I 8201 II Golden Harvest H-1170 Brand I H-1233 Brand II H-1233 Brand II H-1255 Brand II H-1285 Brand II H-1285 Brand II II H-1285 Brand II II Glenn-Garno 1800 I 1800 I 2900 II Great Lakes Hybrid GL1900 Brand I GL206 Brand II GL2537 Brand II GL2634 Brand II GL2634 Brand II Gries GSF-265 II GSF-280 II Jacques J-201 II J-201 II J-231 II Kaiser / Estech 156 I 1212 II 266 II	Rps1c, None Rps1a None	e 44.7 53.0	(4)			(10)	0.1	9-20	'	-1	9-28	4	-4	1.4	1.5
8101 I 8201 II Golden Harvest I H-1170 Brand I H-1233 Brand II H-1235 Brand II H-1285 Brand II H-1285 Brand II Glenn-Garno 1 1800 I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand GL1900 Brand I GL2066 Brand II GL2066 Brand II GL2634 Brand II Gries GSF-265 GSF-280 II Jacques J-201 J-201 II J-231 II Kaiser / Estech 156 156 I 212 II 266 II	Rps1c, None Rps1a None	e 44.7 53.0	(4)		55.0		2.0	0.7	•	7	0.15		10	3.1	2.9
8201 II Golden Harvest H-1170 Brand I H-1170 Brand I H-1233 Brand II H-1233 Brand II H-1265 Brand II H-1285 Brand II H-1285 Brand II Glenn-Garno 1800 I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand I GL2060 Brand I GL2206 Brand II GL2206 Brand II GL22634 Brand II GC2634 Brand II GSF-265 II GSF-265 II GSF-280 II Jacques J-201 II J-231 J2201 II I J-231 II Kaiser / Estech 156 I 212 II 266 II II 166 II	Rps1a None None	53.0		10	55.2	(5)	-2.9	9-7	2	-7	9-15	-1	-10	2.1	2.2
Golden Harvest H-1170 Brand I H-1233 Brand II H-1265 Brand II H-1285 Brand II Glenn-Garno 1800 I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand I GL206 Brand II GL206 Brand II GL206 Brand II GL206 Brand II GL2634 Brand II GSF-150 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II	None		(4)	-6.8	51.0	(5)	-7.1 *	9-10	5	-4	9-20 9-20	4	-6	2.1	1.9
H-1170 Brand I H-11233 Brand II H-1265 Brand II H-1285 Brand II H-1285 Brand II Glenn-Garno 1800 I 1800 I 2800 II 2900 II II 2900 II Great Lakes Hybrid GL1900 Brand I GL2206 Brand II GL2206 Brand II GL2634 Brand II GL2634 Brand II GSF-265 II GSF-265 II GSF-280 II Jacques J-201 II J-231 J-231 II Kaiser / Estech 156 I 122 II 266 II 1066 II	None	52.0		1.5	55.3	(4)	-2.8	9-12	/	-2	9-20	4	•3	2.2	1.9
H-1233 Brand II H-1265 Brand II H-1285 Brand II BOO I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand I GL2906 Brand I GL2066 Brand II GL2537 Brand II GL2634 Brand II GL265 II GSF-265 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II	None	5711	(1)	0.5		(5)		0.10	1		0.00			2.2	1.7
H-1265 Brand II H-1285 Brand II Glenn-Garno 1800 I 1800 I 2900 II Great Lakes Hybrid GL1900 Brand I GL2006 Brand I GL206 Brand II GL206 Brand II GL2537 Brand II GL2634 Brand II GL2634 Brand II II Gries GSF-150 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II 10			(4)	0.5	56.0	(5)	-2.1	9-10	5	-5	9-20	4	-6 1	2.4	2.2
H-1285 Brand II 1800 I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand I GL1900 Brand I GL2206 Brand II GL206 Brand II GL2537 Brand II GL2634 Brand II GL2634 Brand II Gries GSF-265 II GSF-265 II GSF-280 II Jacques J-201 II J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II II 156 I		49.8	(9)	4.3	49.7	(11)	3.8 *	9-28	10	2	10-4	10 12	3	2.4	2.2
1800 I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand I GL2906 Brand I GL206 Brand II GL2537 Brand II GL2634 Brand II Gries GSF-150 GSF-265 II GSF-280 II Jacques J-201 J-231 II Kaiser / Estech 156 1212 II 266 II		48.5 50.2	(5) (9)	0.1 4.7	46.4 50.6	(8) (11)	-1.0 4.7 *	9-27 10-3	14 15	7	10-5 10-8	12	6	2.6	2.3
1800 I 2800 II 2900 II Great Lakes Hybrid GL1900 Brand I GL2000 Brand I GL2006 Brand I GL2006 Brand II GL2037 Brand II GL2634 Brand II Gries GSF-150 GSF-265 II GSF-280 II Jacques J-201 J-201 II J-231 II Kaiser / Estech 156 1212 II 266 II															
2800 II 2900 II Great Lakes Hybrid GL1900 Brand I GL1900 Brand I GL206 Brand I GL206 Brand II GL20537 Brand II GL2634 Brand II GL2634 Brand II Gries GSF-150 II GSF-265 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II	None	49.7	(4)	-1.8	56.9	(5)	-1.2	9-10	5	-4	9-20	4	-5	1.7	1.6
2900 II Great Lakes Hybrid GL1900 Brand I GL1909 Brand I GL206 Brand II GL206 Brand II GL206 Brand II GL206 Brand II GL206 Brand II GL206 Brand II GL206 Brand II GL206 Brand II GGE GSF-150 II GSF-265 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II J2231 II J2231 II J212 II 212 II 266 II II Z66 II Z12 II Z66 II II Z66 II Z12 II Z66 II Z12 II Z66 Z12 II Z12 Z16 Z12 Z12<		58.1	(4)	6.6	-	-		9-23	18	9				2.7	
GL 1900 Brand I GL 1999 Brand I GL 2206 Brand II GL 2537 Brand II GL 2634 Brand II Gries GSF-150 GSF-265 II GSF-280 II Jacques J-201 J-231 II Kaiser / Estech 156 156 I 212 II 266 II		60.0	(4)	8.4		-		9-21	16	7			<u>-</u>	2.1	
GL 1900 Brand I GL 1999 Brand I GL 2206 Brand II GL 2537 Brand II GL 2634 Brand II Gries GSF-150 GSF-265 II GSF-280 II Jacques J-201 J-201 II J-231 II Kaiser / Estech 156 1212 II 266 II	ids														
GL1999 Brand I GL2206 Brand II GL2537 Brand II GL2634 Brand II GSF-150 II GSF-265 II GSF-280 II J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II	Rps1a	45.8	(3)	0.2	45.7	(14)	0.6 H	10-1	5	-4	10-3	8	-1	1.7	1.8
GL2206 Brand II GL2537 Brand II GL2634 Brand II GSF-150 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II	Rps1a				49.8	(9)	1.2		-		10-2	9	0		2.4
GL2634 Brand II Gries GSF-150 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II		51.3	(5)	2.8	47.7	(8)	0.3	9-26	12	4	10-4	11	3	2.1	2.2
Gries GSF-150 II GSF-265 II GSF-280 II Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II	None	48.3	(7)	1.5	39.1	(5)	-1.0	9-25	13	5	10-7	11	3	2.0	2.0
GSF-150 II GSF-265 II GSF-280 II J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II	None	48.5	(20)	4.9 *	48.6	(17)	3.4 *H	9-28	12	5	10-6	10	3	2.3	2.2
GSF-150 II GSF-265 II GSF-280 II J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II															
GSF-265 II GSF-280 II J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II		55.0	(4)	3.4	56.8	(4)	-1.3	9-20	15	6	9-27	11	2	2.7	2.6
Jacques J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II		51.1	(4)	-0.4	54.0	(4)	-4.1	9-20	15	6	9-28	12	3	2.2	2.2
J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II		48.8	(4)	-2.8	53.3	(4)	-4.8	9-15	10	1	9-23	8	-1	1.7	1.8
J-201 II J-231 II Kaiser / Estech 156 I 212 II 266 II															
Kaiser / Estech 156 I 212 II 266 II	Rps1a	44.0	(4)	0.3	49.2	(8)	1.7	9-22	3	-3	9-27	4	-5	1.5	2.0
156 I 212 II 266 II	Rps1a	46.8	(15)	3.0 *	48.0	(4)	2.6	9-26	9	1	10-5	10	1	2.0	2.4
212 II 266 II															
266 II		50.4	(4)	-1.1	61.7	(5)	3.6	9-9	4	-5	9-20	4	-5	1.7	1.4
		50.6	(4)	-1.0	53.1	(4)	-5.0	9-16	11	2	9-23	8	-1	1.9	2.1
310 11		55.3	(4)	3.8		-		9-19	14 23	5 14	-	-	-	2.2 3.2	_
	I None	61.7	(4)	10.1	-	-	-	9-28	23	14	-	-	-	5.4	-
King Grain					40.0	(0)	0.6				0.00	F	4		1.8
KG81 II				-	48.0	(8)	0.6	-	-		9-28	5	4	-	
KG91 II	NOR	-	-		57.5	(4)	-0.6	10.2	-	-2	9-24	9	0	2.1	3.1 2.3
PS90 II		45.4	(4)	0.0	45.7	(15)		10-3	7		10-3	8	1		1.9
KG4602 II KG4615 II	I Rps1a	1c -	-	_	49.8 58.6	(4) (4)	-8.3 0.5	_	-		9-25 10-5	10 19	1 10	_	3.1
Lakeside States	I Rps1a I None, Rps1														
21 Brand II	I Rps1a I None, Rps1	52.0	(7)	5.2	52.7	(8)	5.3	9-28	16	8	10-7	14	5	2.3	2.3
116 I	I Rpsla I None, Rps I None	52.8	(5)	4.4	47.1	(10)	0.4	9-24	11	3	10-2	8	Ō	1.6	1.6
125-A II	I Rps1a I None, Rps1 I None		Ő	2.6	59.8	(5)	6.1	9-24	12	4	10-3	11	3	2.0	2.1
	I Rps1a I None, Rps1 I None I None Rps1a	49.3				-							(cont'd)		

* Statistically significant deviation (P<.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 1987. 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.

		Phyt. Res.		(bu/A) uthern	with de		from			aturity		tive to	check: entral		Lodain	c. Coore
Frand / Entry	MG	Туре	Yield		Dev.	Yield	(n)	and some of the second s				Date			South.	g <u>Score</u> Centra
faumee Valley																
Caliber	Π	Rps1a	42.0	(12)	0.1 L	49.6	(7)	-1.7 L	9-25	5	-2	9-28	5	-3	2.5	2.5
Commander	Ш	None	59.7	(4)	8.1 *	-	-		10-2	27	18				3.3	
Eagle	п	None	-	-		58.5	(4)	0.4				9-22	7	-2		2.3
Enterprise	П	None	39.8	(8)	-2.9	48.3	6	-4.2	9-30	10	3	10-4	12	3	2.1	2.1
Kodiak	Ш	None	47.7	(11)	2.8	47.2	(3)	1.7 H	10-2	16	8	10-11	15	6	3.2	3.4
MV-2E1	П	Rps1a	46.3	(15)	2.5	46.7	(4)	1.4	9-30	13	6	10-10	15	5	2.3	2.1
Sabre	п	None	62.0	(4)	10.5	67.0	(4)	8.9 *	9-19	14	5	9-28	13	4	1.8	2.3
Warrior	п	Rps1a	48.0	(11)	3.1	55.2	6	2.7	9-29	13	5	10-6	14	5	2.4	2.9
Washington V	Ш	Rps1a	45.9	(15)	2.1	43.4	(4)	-2.0 H	10-1	14	6	10-4	9	-1	3.2	3.2
Exp B1	П	None	-	-	-	58.6	(4)	0.5	-	-	-	9-18	2	-7		1.3
orthrup King																
S15-50	П	Rps1c	46.4	(3)	0.9	44.3	(14)	-0.8	9-27	1	-8	9-27	2	-6	2.1	1.8
S23-03	Ĩ	None	43.7	(15)	-0.1	44.9	(12)	-0.9 L	9-23	6	-1	10-1	7	-2	2.2	2.1
S23-12	Î	None	52.9	(7)	6.1 *	50.6	(8)	3.2	9-21	8	1	9-30	6	-2	1.3	1.2
S2596	п	Rps1a	47.8	(20)	2.4 *	46.9	(9)	1.7	9-26	8	1	10-7	10	2	1.8	1.7
S27-10	П	Rps1c	45.7	(11)	0.8	42.9	(5)	-0.2 H	9-27	11	3	10-7	11	2	2.2	1.8
S29-20	п	Rps1a	58.0	(4)	6.5	-	-		9-24	19	10			-	2.3	_
ioneer																
9181	I	Rps1c	-		-	52.9	(5)	-5.2				9-19	3	-6		1.3
9202	П	None		-		57.1	(4)	-1.0		_		9-19	3	-6		1.4
9251	п	Rpsla	52.3	(5)	3.9	49.8	(8)	2.3	9-25	12	4	10-3	10	2	1.5	1.4
9271	П	None	47.6	(15)	3.8 *	51.4	(10)	3.2 *	9-27	10	2	10-4	9	2	1.6	1.9
ride																
B152	I	Rps1c, No	one 45.9	(3)	1.4	45.1	(14)	0.0 L	9-26	-2	-6	9-26	1	-6	1.7	1.5
B236	П	Rps1a	56.4	(4)	4.9	-	-		9-21	16	7			-	2.0	-
B242	п	None	49.3	(11)	4.8	48.6	(3)	3.8 *	9-28	13	5	10-9	12	5	1.9	2.0
roSeeds (Pros	Soy)															
PS138	I	None	49.5	(4)	-2.1	60.4	(5)	2.4	9-9	4	-5	9-20	4	-6	1.7	1.7
PS202	П	Rps1a	49.7	(4)	-1.9		-		9-15	10	1				2.1	0.0
PS210	П	Rps1a	44.3	(16)	-0.3	48.9	(15)	1.0	9-22	7	0	10-1	8	0	1.8	2.0
PS246A	П		54.5	(4)	2.9	63.0	(4)	4.9 H	9-20	15	6	9-28	13	4	2.5	3.0
PS259	П	None	60.1	(4)	8.5	-	-		9-25	20	11	-		-	3.1	-
PS330	ш	None	60.5	(4)	9.0	-	-		9-27	22	13			1 <u>-</u>	3.3	_
PS332	Ш		48.4	(12)	3.6 *H	7	-		9-30	17	10			-	3.0	-
upp																
RS2300	п	Rps1a	43.8	(19)	0.4	45.7	(21)	0.7	9-23	4	-2	10-2	6	-1	1.6	1.7
RS2460P	п	None	46.2	(12)	4.2 *	47.2	(15)	2.4 H	10-1	11	4	10-7	12	5	2.2	2.3
RS2500	Π	None	53.2	(7)	6.5 *	-	-		9-27	15	7				1.9	-
RS2544	Ш	None	49.9	(11)	5.0	46.4	(3)	0.8	10-4	18	10	10-15	19	10	2.6	3.0
Exp 29726	Π	None	57.5	(4)	6.0	61.7	(4)	3.6 *	9-16	11	2	9-24	9	0	1.6	2.4
cott																
2456	П	Rps6	48.1	(11)	3.2	53.9	(3)	8.4 *	9-27	11	3	10-9	13	4	2.9	3.0
3665		None	63.9	(4)	12.4 *	-	-		9-28	23	14	-	-	-	3.8	-
tine																
2710E Brand	п	Rps1a	52.2	(5)	3.7	49.0	(8)	1.6	9-25	11	3	10-4	11	3	2.4	2.1
2750 Brand	п	None	-	(5)	-	61.5	(4)	3.4		_		9-27	12	3	2.4	2.3
2770 Brand	п	None	59.2	(4)	7.7	-	(4)		9-20	15	6				2.3	
3500 Brand		None	51.8	(4)	5.2	_	_		10-3	19	11			-	2.3 3.0	-
A NULL Hrand				101	1.4				11/- 3	17				-	3.0	

* Statistically significant deviation (P<.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 1987. 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.

		Phyt.				leviation		mean				ive to				0
		Res.		uthern	the second se		entral		S	outher	the second s		Central			g Score
Brand / Entry 1	MG	Туре	Yield	(n)	Dev.	Yield	(n)	Dev.	Date	H78	C79	Date	H78	C79	South.	Centra
ferra																
Decathlon Brand	Π	None	55.9	(4)	4.4	60.2	(4)	2.1	9-17	12	3	9-25	10	1	2.6	2.7
Hurdle Brand	п	Rpsla	46.9	(5)	-1.6	44.1	(8)	-3.3 L	9-24	10	2	10-2	9	î	1.7	1.5
Olympian Brand	_	None	48.3	(7)	1.5	49.7	(5)	-4.0	9-25	12	5	10-4	12	4	2.1	2.0
Runner Brand	T	Rpsla	45.7	(5)	-2.8	42.7	(10)	-4.0	9-20	6	-2	9-30	6	-2	2.4	2.0
Sprint Brand	п	None	50.6	(7)	3.8	56.8	(5)	3.1	9-29	16	9	10-6	15	6	2.7	2.7
275E	Π	None	58.5	(4)	7.0	62.7	(4)	4.6 H	9-25	20	11	10-1	16	7	2.6	3.2
oris																
V207	Π	Rps1a	45.0	(19)	-0.2	46.2	(23)	1.2	9-21	4	-3	10-2	5	-2	2.2	2.2
V311	Ш	None	45.7	(15)	1.9	48.1	(12)	2.3	10-1	14	6	10-9	15	6	2.9	2.7
Exp 2624	П	Rpsla		()		62.5	(4)	4.4		_		9-26	11	2		2.5
Exp 2801	п	None	54.7	(4)	3.2		-		9-19	14	5				2.7	_

* Statistically significant deviation (P<.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.

								Yie	d (bu	(A)				- 2					
				thern		utheas			uthwe			South		South					
Brand	Fatas		Regio			awee		(St.]				rien				<u>Co.)</u>			Lodging
	Entry	1987	Avg.	(11)	1987	Avg.	(1)	1987	Avg.	(n)	1987	Avg.	(n)	1987	Avg.	(n)	(days)	(in)	Score
Public	Amcor	53.3	44.0	(21)	50.8	50.8	(8)	46.6	34.0	(5)	62.0	42.8	(4)	54.1	44.2		9	47	4.0
Public	Beeson 80	27.2	36.0	(21)	10.6	40.7	(8)	40.7	29.9	(5)	39.7	38.6	(4)	17.8	31.9	(4)	8	37	2.4
Public	BSR 101	54.5	48.6	(15)	53.6	51.4	(7)	46.9	44.0	(3)	66.2	48.6	(2)	51.4	46.5	(3)	-4	41	2.0
Public	BSR 201	53.8	48.9	(18)	49.0	51.0	(10)	49.2	42.9	(3)	60.8	46.4	(2)	56.3	49.4	(3)	6	39	3.1
Public	Century	54.0	46.0	(22)	52.9	52.2	(9)	46.8	37.2	(5)	61.7	44.2	(4)	54.7	44.7	(4)	3	43	2.0
Public	Century 84	57.3	46.7	(13)	54.7	49.8	(5)	51.9	41.1	(3)	65.6	48.8	(2)	56.9	46.0	(3)	4	40	1.6
Public	Corsoy	50.7	42.7	(30)	48.1	47.4	(12)	39.8	34.1	(7)	67.5	43.4	(5)	47.4	42.6	(6)	1	44	3.4
Public	Corsoy 79 †	48.4	43.5	(28)	45.0	51.5	(11)	40.0	31.7	(7)	59.7	41.6	(5)	48.9	44.6	(5)	9-16	44	3.2
Public	Elgin	60.2	47.8	(19)	53.8	51.3	(8)	54.1	42.9	(4)	69.1	45.0	(3)		47.6		2	36	2.6
Public	Hack	55.4	48.2	(14)	51.1	50.9	(6)	47.9	44.7	(3)	65.0	47.5	(2)	57.8	46.9	(3)	4	39	1.9
Public	Hardin	51.4	44.3	(21)	48.0	51.1	(8)	39.6	35.9	(5)	69.1	41.4	(4)	48.7	44.2	(4)	-3	44	3.4
Public	Hobbit	60.3	44.3	(19)	56.3	50.6	(6)	51.3	33.9	6	73.3	* 46.4	(3)	60.4	* 48.7		9	28	1.2
Public	Hodgson 78	46.3	41.1	(30)	45.2	47.9	(11)	37.9	32.5	(8)	57.7	38.9	6	44.4	42.4	(5)	-10	39	2.1
Public	Hoyt	56.6	51.2	(11)		* 54.6	(6)		* 48.9	(2)	64.4		-	43.6	36.6	(2)	5	26	1.8
Public	Keller	53.0	44.0	(12)	44.4	45.1	(4)	44.1	36.3	(3)	65.0	48.8	(2)	58.6	47.1	• •	4	38	2.5
Public	Miami	47.5	41.4	(13)	42.2	44.6	(5)	38.9	32.6	(3)	63.9	47.1	(2)	44.9	40.9	(3)	-1	41	2.5
Public	Nebsoy	52.4	43.7	(22)	51.4	47.8	(9)	43.0	34.0	(5)	59.5	41.1	(4)	55.7	49.2		2	38	2.1
Public	Pella	66.8	* 46.5	(17)	64.0	* 52.8	(5)	57.4	35.8	(5)	75.4	* 47.3	(3)	70.4	* 51.3		10	41	2.5
Public	Preston	58.2	51.4	(10)	54.0	52.0	(5)	56.4	46.1	(2)	62.6	42.2	(4)	59.6	49.6	(2)	7	38	2.2
Public	Sherman	65.1	*	-	59.6	•	-	66.3	• •	-	71.9		-	62.8	•	-	13	38	3.5
Public	Sibley	48.5	49.0	(12)	46.3	51.4	(7)	36.8	35.1	(2)	63.9	-	_	46.8	47.0	(2)	-8	39	2.8
Public	Vickery	49.0	43.8	(22)	45.8	50.9	(9)	41.0	33.2	(5)	61.5	42.2	(4)	47.6	42.4	(4)	-2	44	3.8
Public	Weber 84	46.6	41.7	(17)	41.8	46.2	(6)	35.8	34.3	(4)	67.0	40.2	(3)	41.8	43.5	(4)	-4	41	2.7
Public	Wells II	49.0	42.1	(24)	45.5	46.5	(9)	43.0	34.3	6	58.1	42.9	(5)	49.6	43.0	(4)	-1	42	2.1
Public	Zane		* 48.6	(11)	58.2	* 52.5	(3)	58.3	* 45.6	(3)	68.6	53.4	(2)	58.9	44.4	(3)	11	42	3.0
Agripro	AP2190	51.9	44.9	(11)	49.0	51.1	(3)	46.1	39.3	(3)	57.8	41.3	(2)	54.8	46.7	(3)	-2	38	2.1
Agripro	AP3132	60.2		(T)	55.4	53.8	(2)	55.9	45.9	(2)	69.9	-	-	59.6	46.9		6	38	2.2
	Test mean LSD.05	55.5 5.99			53.0 8.24	4	-	49.8 8.80	4		65.11 9.28			53.60 10.43			3.40 2.70	39.70 2.70	2.45 0.64

Check variety used to calculate deviation from standard maturity.

TABLE 3. (Continued) Southern Michigan.

		Entire Southern Region	Southeast (Lenawee Co.)	Yield (bu/A) Southwest (St. Joseph Co.)	Far Southwest (Berrien Co.)	South Central (Ingham Co.)	Maturity	Height	Lodging
and	Entry	1987 Avg. (n)	1987 Avg. (n)	1987 Avg. (n)	1987 Avg. (n)	1987 Avg. (n)	(days)	(in)	Score
	Ex 2323 Ex 2324 HP2530	51.7 54.7 55.4 46.5 (18)	49.1 51.1 51.0 50.7 (6)	45.1 46.1 52.4 40.1 (4)	60.0 64.2 62.0 43.3 (4)	52.5 57.4 56.2 49.8 (4)	-1 1 2	37 37 37	1.9 1.9 2.0
row row row ahan	A1937 A2187 A2234 A2943 1250 Brand	46.2 43.3 (20) 49.7 44.1 (11) 56.2 - - 65.2 * 49.5 (15) 60.7 45.7 (17)	47.8 50.5 (7) 48.9 47.6 (3) 56.3 65.7 * 55.4 (4) 52.7 50.1 (5)	33.5 34.8 (5) 37.5 38.0 (3) 48.5 - - 60.3 * 45.3 (4) 59.0 * 38.6 (5)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-7 -4 -4 11 9	42 40 35 40 41	2.8 1.9 1.3 2.6 3.0
lahan lahan lahan lahan lahan	7260X Brand 7299X Brand 8244X Brd Blend 8252X Brand 8266X Brd Blend	62.9 *	57.2 56.1 (2) 55.8 - - 52.4 - - 55.1 - - 57.6 * -	51.5 43.4 (2) 60.7 * 55.1 56.3 56.4	70.1 - 68.3 - 61.4 - 72.1 * - 64.2	57.2 48.6 (2) 58.0 58.3 68.1 * 54.3	5 8 3 5 3	35 43 41 38 40	2.3 3.4 2.5 2.4 2.2
iryland iryland iryland iryland iryland	DSR-155 DSR-171 DSR-204 DSR-252 DSR-270	44.0 54.4 44.9 (22) 47.7 56.5 61.4 *	41.4 54.6 50.3 (9) 47.7 52.9 62.7 *	38.2 - - 49.0 39.2 (5) 37.6 - - 51.2 - - 54.5 - -	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	42.8 48.2 42.5 (4) 49.8 53.0 59.9	-10 3 -5 1 5	37 41 35 38 33	1.5 2.7 1.7 1.9 1.6
iryland iryland iryland iryland iryland	DSR-287 DSR-297 DSR-304 DSR-317 DSR-335	63.5 * 50.0 (11) 59.4 47.3 (11) 63.0 * 60.3 47.7 (11) 58.7	62.5 * 53.3 (3) 62.9 * 54.2 (3) 59.5 * 60.5 * 55.1 (3) 54.6	58.0 * 45.6 (3) 50.7 39.6 (3) 57.7 * 56.5 45.4 (3) 59.7 *	71.4 52.8 (2) 69.8 51.8 (2) 66.7 - - 68.0 53.1 (2) 61.3 - -	62.3 * 49.4 (3) 54.1 45.2 (3) 68.1 * 56.3 38.9 (3) 59.0	9 12 13 15 14	43 43 40 45 42	2.8 3.1 3.1 3.3 3.7
ryland ryland iryland iryland Kalb-Pfizer	DST-2104 DST-2207 DST-2308 DST-2311 CX283	57.7 58.0 57.3 65.3 * 59.2 46.8 (15)	52.6 55.6 58.2 * 61.5 * 55.3 52.3 (4)	49.8 - - 50.9 - - 53.6 - - 57.3 - - 51.8 39.5 (4)	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	57.4 61.7 * 52.6 68.4 * 59.7 48.9 (4)	1 1 4 7 8	41 41 34 37 43	2.2 1.9 1.3 3.5 3.2
Kalb-Pfizer hl Fields hk rst rst	CX326 DF-101 Brand G3197 8011 8101	63.5 * 52.7 (7) 49.9 48.1 (7) 53.5 50.5 (5) 47.4 44.8	62.4 * 57.0 (2) 49.5 53.3 (2) 55.7 44.4 42.9	57.8 * 46.2 (2) 42.3 39.7 (2) 42.4 37.5 37.7	76.4 * 56.4 60.5 58.0 58.5	57.242.9(2)51.546.9(2)55.346.8(2)49.739.8	11 -6 -3 -9 -5	37 39 35 37 41	2.1 1.5 1.4 3.1 2.1
rst znn-Garno znn-Garno znn-Garno Iden Harvest	8201 1800 2800 2900 H-1170 Brand	53.0 49.7 58.1 60.0 52.0	51.7 49.4 57.9 * 53.7 56.3	45.2 45.6 49.5 55.4 41.2	61.4 54.1 66.2 65.7 58.3	53.7 49.8 58.8 65.0 * 52.3	-4 -6 7 5 -6	41 39 41 40 41	2.2 1.7 2.7 2.1 2.2
olden Harvest olden Harvest olden Harvest LH LH	H-1233 Brand H-1265 Brand H-1285 Brand GL2206 Brand GL2537 Brand	58.7 49.8 (9) 51.4 48.5 (5) 61.0 * 50.2 (9) 53.7 51.3 (5) 52.6 48.3 (7)	49.3 50.0 (2) 52.4 - - 53.4 52.2 (2) 49.9 - - 51.3 51.9 (2)	49.6 45.0 (2) 41.1 - - 57.9 * 47.4 (2) 50.6 - - 50.2 42.8 (2)	73.2 * 53.3 (2) 65.4 - - 72.1 * 55.4 (2) 62.9 - - 60.6 - -	62.8 * 50.4 (3) 46.8 41.8 (2) 60.7 * 47.1 (3) 51.4 46.4 (2) 48.5 43.8 (2)	4 5 10 2 4	38 38 41 45 38	2.7 2.5 3.1 2.2 2.3
LH ies ies ies ques	GL2634 Brand GSF-150 GSF-265 GSF-280 J-231	60.3 48.5 (20) 55.0 - - 51.1 - - 48.7 - - 55.0 46.8 (15)	55.0 54.0 (7) 55.0 - - 53.8 - - 45.8 - - 52.0 53.5 (4)	56.3 39.2 (5) 51.9 - - 47.4 - - 46.1 - - 49.7 40.5 (4)	74.1 * 50.5 (4) 60.7 58.4 62.7 67.5 44.8 (3)	55.9 48.4 (4) 52.2 - - 44.9 - - 40.4 - - 51.0 47.9 (4)	10 4 4 -1 1	39 38 36 37 40	3.1 2.7 2.2 1.7 2.1
iser / Estech iser / Estech iser / Estech iser / Estech keside States	156 212 266 310 21 Brand	50.4 50.6 55.3 61.7 *- 59.2 52.0 (7)	52.9 - - 53.4 - - 47.0 - - 56.4 - - 53.5 53.8 (2)	40.9 48.4 51.9 61.2 * 52.2 45.5 (2)	58.0 53.6 72.1 * 69.3 79.3 *	49.9 46.8 50.3 59.8 51.6 43.0 (2)	-7 0 3 12 8	41 40 38 41 39	1.7 1.9 2.2 3.2 2.7
keside States keside States aumee Valley aumee Valley aumee Valley	Kodiak	56.7 52.8 (5) 55.2 49.3 (7) 59.6 - - 59.0 47.7 (11) 58.4 46.3 (15)	48.5 54.1 52.2 (2) 63.5 * 59.0 * 52.6 (3) 54.7 51.2 (4)	56.0 55.2 41.6 (3)	68.1 67.6 58.6 64.5 50.1 (2) 70.4 46.8 (3)	59.3 48.3 (2) 52.4 47.9 (2) 60.5 * - - - 57.3 47.2 (3) 58.6 46.7 (4)	2 4 16 11 9	41 43 42 41 41	1.8 2.1 3.3 3.6 3.0 (cont'd)
	Test mean	55.58	53.04	49.84	65.11	53.60	3.40	39.70	2.45

TABLE 3. (Continued) Southern Michigan.

		Entire	Com	-	Con	theory			(bu/		Far S	outhe	unct	South	Can	ral			
			Region		(Lena	theast			thwes		(Berr				ham (Maturity	Height	Lodgin
Brand	Entry	1987		(n)	1987			1987			1987				Avg.		(days)	(in)	Score
Maumee Valley	Sabre	62.0	*	_	57.5	•		55.4	_	_	70.1	_	_	65.0	*_	_	3	39	1.8
Maumee Valley	Warrior	58.9	48.0	(11)	54.3	52.1	(3)		42.0	(3)	68.0	52.3	(2)	56.7	46.9	(3)	6	40	2.8
Maumee Valley	Washington V	60.5	45.9	(15)	52.5	52.0	(4)		+ 43.3		66.1	44.6	(3)	63.0	* 43.3	(4)	12	46	3.8
Northrup King	S23-03	49.6	43.7	(15)	53.0	50.3	(4)	38.9	40.3	(4)	57.7	41.2	(3)	48.8	42.4	(4)	-3	39	2.3
Northrup King	S23-12	57.2	52.9	(7)	57.0	55.5	(2)	56.6	48.2	(2)	64.3		-	51.1	49.3	(2)	-1	43	1.3
Northrup King	S2596	56.4	47.8	(20)	49.9	52.8	(8)	49.0	41.4	(4)	64.3	45.0	(4)		* 46.8	(4)	1	36	1.7
Northrup King	S27-10	57.7	45.7	(11)	54.3	48.9	(3)	49.3	40.6	(3)	67.4	47.0	(2)	59.8	46.8	(3)	5	37	2.5
Northrup King	S29-20	58.0	-		54.3			57.1	-		73.9	*		46.8		-	7	42	2.3
Pioneer	9251	56.6	52.3	(5)	54.5	-		53.0	-		67.1		-	51.8		(2)	2	39	1.6
Pioneer	9271	59.5	47.6	(15)	57.4	54.0	(4)	53.3	43.1	(4)	72.2	* 43.5	(3)	55.2	48.7	(4)	5	36	1.9
Pride	B236	56.4	-	-	58.2		-	51.4	-		62.7	-	-	53.3	-	-	5	41	2.0
Pride	B242	59.9	49.3	(11)		53.8	(3)	48.0	40.6	(3)		* 56.9	(2)	56.9	48.6	(3)	5	44	2.2
Prosoy	PS138	49.5	-		53.4	-		38.4	-		53.1		-	52.9		-	-7	38	1.7
Prosoy	PS202	49.7	-		47.6	-		47.4	-		62.1		-	41.7	-		-1	37	2.1
Prosoy	PS210	51.9	44.3	(16)	52.1	51.9	(6)	44.2	35.8	(4)	64.7	-	-	46.8	47.1	(3)	-1	42	1.6
Prosoy	PS246A	54.5	-	-	52.6			41.0	-		67.6	-	-	56.7		-	4	39	2.5
Prosoy	PS259	60.1	-		58.5			55.1			67.1	-	-	59.6		-	9	42	3.1
Prosoy	PS330	60.5	-		62.0			57.1	-		67.7	-	-	55.3	-	-	11	42	3.3
Prosoy Rupp	PS332 Exp 29726	59.0 57.5	48.4	(12)	53.9	* 57.3	(4)	57.3 48.7	35.7	(3)	61.0 68.8	46.8	(3)	59.4 58.6		(2)	12 0	46 37	4.0 1.5
Rupp	RS2500	60.7	53.2	(7)	59 7	* 56.6	(2)	54.7	45.4	(2)	70.0	_	_	58.3	49.3	(2)	7	36	2.1
Rupp	RS2544		* 49.9			* 51.7		57.3	47.8	(3)	70.7	55.9	(2)		* 46.4		14	45	3.0
Scott	2456		48.1			48.8	(3)	54.8	42.4	(3)	60.3	46.8	(2)		* 53.9		5	41	3.2
Scott	3665	63.9			62.3			56.6	-		71.9			64.8		-	12	42	3.8
Stine	2710E Brand	55.1	52.2	(5)	49.4	-		55.1		-	63.5	-	-	52.2		(2)	2	41	2.5
Stine	2770 Brand	59.2	_		58.7	•		58.8	•		67.3		-	52.1	-	-	4	40	2.3
Stine	3500 Brand	62.3	* 51.8	(8)	58.3	* 51.8	(2)	60.6	* 51.5	(2)	74.1	* 54.4	(2)	56.0	49.4	(2)	13	42	3.3
Terra	275E	58.5			55.2	-		58.8	* ·		64.3			55.7		-	9	40	2.6
Terra	Decathlon Brand		-		55.4	-		50.3	-		67.2		-	50.8		-	1	38	2.5
Тепа	Hurdle Brand	49.2	46.9	(5)	43.6	-		48.9	-		60.0		-	44.2	40.9	(2)	0	39	1.8
Тегга	Olympian Brand		48.3	(7)	55.8	54.5	(2)		42.7	(2)	69.8		-	43.8	-	(2)	3	39	2.3
Тегга	Runner Brand	47.5	45.7	(5)	45.0	-		40.1			57.4		-	47.6		(2)	-4	39	2.5
Тегта	Sprint Brand	57.2	50.6	(7)	55.6	53,9	(2)		42.3	(2)	63.1		-		* 49.2	(2)	9	42	3.4
Voris	Exp 2801	54.7			49.9	-		41.0	-		70.7			57.2		-	3	41	2.7
Voris	V207	47.6	45.0	(19)	44.3	48.8	(8)	44.0	35.6	(4)	55.2	43.4	(3)	47.1	48.1	(4)	-4	42	2.7
Voris	V311	55.2	45.7	(15)	57.3	52.8	(4)	53.4	40.3	(4)	62.1	45.0	(3)	47.9	44.5	(4)	9	42	3.1
	Test mean	55.58	1		53.04			49.84			65.11			53.60			3.40	39.70	
	CV	7.8%			9.3%			10.6%	>		8.5%			11.19			10.1%	4.9%	
	LSD.05	5.99			8.24			8.80			9.28			10.43	5		2.70	2.70	0.64

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

TABLE 4. Central Michigan.

		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Yield (bu/A)		
Brand	Entry	Entire Centra Region 1987 Avg. (n	(Ingham Co.)	Central <u>(Saginaw Co.)</u> 1987 Avg. (n)	East CentralEast Central(Sanilac Co.)(Macomb Co.)1987 Avg. (n)1987 Avg. (n)	- Maturity Height Lodg (days) (in) Scor
Public	Amcor	59.8 45.7 (2	1) 54.1 44.2 (4)	50.7 43.4 (9)	64.5 * 49.0 (8) 70.1 49.0 (8)	7 48 3.
Public	Beeson 80	27.2 37.1 (2		16.9 40.6 (10)	38.0 35.6 (9) 36.1 35.6 (9)	
Public	BSR 101	59.2 46.6 (1		55.3 * 44.7 (7)	63.6 * 50.1 (5) 66.5 50.1 (5)	
Public	BSR 201	61.5 * 47.0 (1		60.0 * 44.4 (8)	56.4 49.9 (5) 73.4 49.9 (5)	
Public	Century	57.3 44.8 (2		51.0 44.0 (11)	57.0 * 45.3 (9) 66.4 45.3 (9)	
Public	Century 84	63.9 * 48.3 (1	3) 56.9 46.0 (3)	60.6 * 45.8 (5)	64.7 * 52.3 (5) 73.4 52.3 (5)	5 42 2.
Public	Corsoy	51.7 40.9 (3		43.8 40.4 (15)	56.1 40.8 (10) 59.5 40.8 (10)	
						(con
	Test mean	57.74	53.60	53.19	56.22 69.36	23.8 40.2 2.3
	LSD.05	7.07	10.43	11.64	13.95 11.04	3.0 3.7 0.6

TABLE 4. (Continued) Central Michigan.

		Entine Control	South Control	Yield (bu/A)	East Central	East Central			
Brand	Entry	Entire Central <u>Region</u> 1987 Avg. (n)	South Central (Ingham Co.) 1987 Avg. (n)	Central (Saginaw Co.) 1987 Avg. (n)	<u>(Sanilac Co.)</u> 1987 Avg. (n)	(Macomb Co.) 1987 Avg. (n)	Maturity (days)	Height (in)	Lodging Score
Public Public Public	Corsoy 79 † Dassel Dawson	53.7 45.2 (35) 49.2 41.3 (11) 50.1 42.2 (23)	48.9 44.6 (5)	47.4 44.1 (15) 48.6 45.1 (3) 42.1 39.7 (8)	51.4 47.3 (11) 47.3 37.9 (4) 50.5 45.1 (7)			44 30 37	3.0 1.5 2.1
Public Public Public Public Public	Elgin Hack Hardin Hodgson 78 Hoyt	65.6 * 48.2(20)59.346.8(14)56.147.3(27)52.142.8(38)53.644.3(12)	63.6 * 47.6 (4) 57.8 46.9 (3) 48.7 44.2 (4) 44.4 42.4 (5) 43.6 36.6 (2)	64.7 * 48.6 (9) 49.1 43.3 (6) 50.4 48.9 (10) 48.4 41.7 (16) 53.7 43.8 (6)	60.3 * 50.5 (6) 57.2 * 50.8 (5) 58.7 * 48.8 (9) 57.9 * 44.5 (12) 54.5 48.8 (4)	73.850.5(6)73.250.8(5)66.548.8(9)57.744.5(12)62.648.8(4)	2 2 -1 -9 4	38 39 44 40 25	3.1 2.0 3.1 1.8 1.3
rublic rublic rublic rublic rublic	Keller Miami Nebsoy Pella Preston	59.546.5(12)50.342.1(13)57.343.4(24)67.0 * 49.0(17)63.2 * 47.5(11)	58.6 47.1 (3) 44.9 40.9 (3) 55.7 49.2 (4) 70.4 * 51.3 (4) 59.6 49.6 (2)	53.2 43.3 (4) 50.4 41.5 (5) 50.4 42.9 (11) 61.7 * 43.0 (6) 59.6 * 44.4 (5)	55.9 48.7 (5) 48.2 43.4 (5) 58.6 * 41.4 (9) 66.8 * 52.8 (7) 59.0 * 50.3 (4)	70.348.7(5)57.743.4(5)64.741.4(9)69.152.8(7)74.750.3(4)	3 -3 2 7 6	40 42 40 43 42	3.1 2.4 1.9 2.7 2.8
Public Public Public Public Public	Sibley Vickery Weber 84 Wells II Zane	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	46.847.0(2)47.642.4(4)41.843.5(4)49.643.0(4)58.944.4(3)	42.943.0(7)49.543.2(12)45.140.6(7)49.143.2(12)51.944.3(3)	48.4 44.1 (6)	63.146.4(4)64.446.0(9)70.944.1(6)56.339.7(10)69.851.3(5)	-9 -1 -3 -2 7	37 46 41 45 41	2.1 3.6 2.3 2.1 3.2
Agripro Agripro Agripro Asgrow Asgrow	AP1776 AP2021 Ex 1989 A0949 A1525	56.1 56.3 (5) 58.9 48.7 (8) 61.5 * 64.2 (5) 49.5 41.8 (10) 57.0 43.7 (14)	52.5 - - 50.2 43.5 (2) 47.3 - - 49.6 42.7 (2) 52.2 43.4 (3)	57.4 * 52.8 42.5 (2) 53.1 39.9 36.8 (2) 52.0 44.9 (3)	52.357.3(2)59.5 * 54.3(4)66.6 * 72.7(2)45.243.7(4)55.745.2(5)	62.457.3(2)73.254.3(4)78.9* 72.7(2)63.343.7(4)68.145.2(5)	-9 -6 0 -14 -10	37 42 41 39 39	1.2 2.4 2.9 2.3 1.1
Asgrow Callahan Callahan Callahan Callahan	A 1937 1250 Brand 6180 Brand 6262 Brand 7260X Brand	55.5 46.8 (24) 67.1 * 50.2 (15) 59.1 48.6 (13) 61.6 * 49.3 (11) 64.4 * 52.4 (8)	43.0 43.3 (4) 62.1 * 49.2 (4) 51.5 45.5 (3) 49.6 45.7 (3) 57.2 48.6 (2)	51.5 46.3 (8) 55.2 * 46.0 (5) 60.3 * 49.7 (3) 57.8 * 45.6 (3) 66.6 * 49.8 (2)	60.6 * 49.8 (8) 63.8 * 54.5 (6) 49.1 49.5 (5) 60.6 * 53.7 (5) 58.6 * 55.6 (4)	67.0 49.8 (8) 87.3 * 54.5 (6) 75.6 49.5 (5) 78.6 * 53.7 (5) 75.3 55.6 (4)	-9 6 -8 3 3	40 41 38 40 37	2.2 3.1 1.2 2.7 3.0
Callahan Callahan Callahan Callahan Callahan	7299X Brand 8200X Brand 8220X Brand 8244X Brd Blen 8252X Brand	63.6 * 61.8 * 59.7 d 67.5 * 68.0 *	58.0 53.4 55.5 58.3 68.1 *	56.0 * 55.7 * 56.4 * 61.8 * 62.6 *	62.6 * 70.2 (2) 61.2 * 69.1 (2) 54.3 63.4 (2) 70.8 * 75.0 (2) 66.6 * 70.6 (2)	77.9 * 70.2 (2) 77.0 * 69.1 (2) 72.6 63.4 (2) 79.2 * 75.0 (2) 74.6 70.6 (2)	6 -5 -1 3 3	43 40 39 43 42	2.9 1.4 2.8 2.6 2.5
Callahan Dairyland Dairyland Dairyland Dairyland	8266X Brd Blen DSR-128 DSR-135 DSR-155 DSR-171	d 64.0 * 53.6 45.1 (13) 52.7 42.6 (15) 50.7 52.0 (5) 52.2 45.2 (26)	54.3 52.0 45.8 (3) 46.0 45.1 (3) 42.8 48.2 42.5 (4)	61.4 * 48.1 40.5 (3) 46.6 38.8 (3) 44.5 49.4 45.7 (10)	60.0 * 70.2 (2) 51.9 46.5 (5) 54.3 45.2 (5) 48.7 57.7 (2) 47.8 46.4 (8)	80.4 * 70.2(2)62.446.5(5)63.945.2(5)66.757.7(2)63.546.4(8)	3 -10 -10 -10 1	42 37 37 37 41	2.6 1.6 2.3 1.2 2.7
Dairyland Dairyland Dairyland Dairyland DeKalb-Pfizer	DSR-204 DSR-252 DST-2104 DST-2207 CX187	52.6 61.9 * 57.6 63.2 * 55.5 57.0 (5)	49.8 53.0 57.4 61.7 * 47.6	50.8 55.8 * 54.5 54.7 48.8	38.055.0(2)65.0*69.4(2)50.659.3(2)62.1*68.2(2)50.562.8(2)	72.055.0(2)73.969.4(2)68.059.3(2)74.368.2(2)75.062.8(2)	-4 1 1 1 -7	35 37 41 42 38	2.3 2.0 2.4 2.5 1.3
DeKalb-Pfizer Diehl Fields Funk Garst Garst	CX265 DF-101 Brand G3197 8011 8101	58.947.6(9)57.450.8(9)58.946.8(10)53.755.2(5)50.451.0(5)	53.9 44.5 (3) 51.5 46.9 (2) 55.3 46.8 (2) 49.7 - - 39.8 - -	57.0 * 46.6 (2) 62.5 * 54.5 (2) 59.1 * 48.1 (2) 46.7 47.6	59.9 * 50.4 (4) 41.2 48.9 (4) 51.0 47.3 (4) 54.4 59.1 (2) 55.0 57.0 (2)	64.750.4(4)74.548.9(4)70.147.3(4)63.959.1(2)59.157.0(2)	3 -8 -5 -12 -7	44 38 35 39 42	2.7 1.7 1.6 3.0 2.4
Garst Glenn-Garno Golden Harvest Golden Harvest Golden Harvest	H-1233 Brand	55.3 56.1 56.9 (5) 55.8 56.0 (5) 64.1 * 49.7 (11) 55.4 46.4 (8)	53.7 49.8 52.3 62.8 * 50.4 (3) 46.8 41.8 (2)	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	59.2 * 58.2 (2) 49.8 61.4 (2) 48.0 59.3 (2) 65.7 * 53.8 (5) 54.0 48.0 (4)	57.2 58.2 (2) 73.0 61.4 (2) 70.7 59.3 (2) 77.7 * 53.8 (5) 56.5 48.0 (4)	-5 -6 -6 3 3	41 39 39 41 40	1.9 1.8 1.8 3.0 2.5
Golden Harvest GLH GLH GLH GLH	H-1285 Brand GL1900 Brand GL1999 Brand GL2206 Brand GL2634 Brand	64.9 * 50.6 (11) 60.4 45.7 (14) 57.7 49.8 (9) 55.1 47.7 (8) 61.9 * 48.6 (17)	60.7 * 47.1(3)49.245.8(3)49.444.1(2)51.446.4(2)55.948.4(4)	52.8 44.0 (3) 57.4 * 43.8 (3) 57.3 * 45.4 (2) 49.1 39.7 (2) 52.6 44.0 (6)	67.7 * 56.7 (5) 57.6 * 48.5 (5) 62.4 * 51.3 (4) 60.4 * 52.4 (4) 58.7 * 52.7 (7)	78.5 * 56.7 (5) 77.6 * 48.5 (5) 61.8 51.3 (4) 59.4 52.4 (4) 80.2 * 52.7 (7)	-2 0 1	43 37 40 46 39	2.9 2.2 2.6 2.4 2.7
Gries Gries Gries	GSF-150 GSF-265 GSF-280	56.8 54.0 53.3	52.2 44.9 40.4	57.1 * 54.9 49.5	56.7 58.9 (2) 58.8 * 58.0 (2) 57.8 * 61.6 (2)	61.2 58.9 (2) 57.3 58.0 (2) 65.4 61.6 (2)	3	38 37 38	2.6 2.2 1.8 (cont'd)
	Test mean LSD.05	57.74 7.07	53.60 10.43	53.19 11.64	56.22 13.95	69.36 11.04	23.8 3.0	40.2 3.7	2.34 0.68

Check variety used to calculate deviation from standard maturity. Not significantly different from the highest yield within that column. 1

TABLE 4. (Continued) Central Michigan.

		Entire	Cent	tral	South (Ingha			Yield Cer (Sagin	ntral			Centr lac C			Centra mb C		Maturity	Height	Lodging
Brand	Entry	1987 A		(n)	1987			1987			1987			1987			(days)	(in)	Score
Jacques	J-201	59.5 4		(8)		44.3	(2)		38.4	(2)		* 56.9		75.1			-7	41	2.3
Kaiser / Estech	156	61.7 * (61.7	(5)	49.9	÷.,		55.1 *	-	-	64.8	* 70.8	(2)	76.9	* 70.8	(2)	-7	41	1.6
Kaiser / Estech	212	53.1 -	-		46.8	-		54.9	- 1		45.4	55.4	(2)	65.4	55.4	(2)	-2	40	2.0
King Grain	KG81	55.9 4	18.0	(8)		40.2	(2)	55.9 *		(2)	53.6	52.6	(4)	71.8	52.6	(4)	-4	42	2.0
King Grain	KG91	57.5 -	-		53.1			58.0 *			53.3	59.4	(2)	65.5	59.4	(2)	0	41	3.1
King Grain	KG4602	49.8 -	-		35.9	-		44.5			51.0	59.4	(2)	67.9	59.4	(2)	0	37	1.9
King Grain	KG4615	58.6 -	-		58.8	-		42.8	-		63.7	• 66.4	(2)	69.1	66.4	(2)	10	45	3.1
King Grain	PS90	54.8 4	15.7	(15)	46.6	45.3	(4)	46.3	43.0	(5)	58.3	* 48.2	(6)	68.0	48.2	(6)	-1	46	2.6
Lakeside States	21 Brand	65.5 *		(8)	51.6	43.0	(2)	62.8 *	45.8	(2)	65.3	* 61.0	(4)	82.2	* 61.0	(4)	6	42	3.0
Lakeside States	116	56.9 4		(10)		48.3	(2)		41.1	(2)		51.7	(4)	67.7		(4)	0	40	1.5
Lakeside States	125-A	63.9 *		(5)		47.9	(2)	54.4				* 74.3	(2)		* 74.3	(2)	3	43	2.2
Maumee Valley	Caliber	53.3 4		(7)		45.6	(4)	52.4	-			56.2	(2)	62.4	56.2	(2)	-4	41	2.3
Maumee Valley	Eagle	58.4	_	_	45.5	_ 1		61.5	•		56.7	63.4	(2)	70.1	63.4	(2)	-2	38	2.3
Maumee Valley			48.3	(6)		37.9	(3)		-			* 63.2		68.6	63.2	(2)	3	37	2.2
Maumee Valley		67.0 *			65.0			61.6				* 70.6			* 70.6		4	41	2.3
Maumee Valley			_		45.8	-		55.2	* ·			* 66.8			66.8	(2)	-7	39	1.3
Maumee Valley		61.9 *		(6)	56.7	46.9	(3)	60.1		-	51.7		(2)		* 65.3	(2)	6	43	3.0
Northrup King	S15-50	55.2	44.3	(14)	52.8	46.4	(3)	56.8	* 43.2	(3)	43 5	44.9	(5)	67.5	44.9	(5)	-8	42	2.0
Northrup King	S23-03		44.9	(12)	48.8	42.4	(4)		42.5	(3)	48.2		(5)	64.9	48.4	(5)	-3	39	2.4
Northrup King	S23-12	61.1 *			51.1	49.3	(2)		* 51.0			* 51.1		70.7	51.1	(4)	-4	45	1.1
Pioneer	9181		52.9		45.7	-	(2)	45.1	-	(2)		* 58.3		55.0		(2)	-7	34	1.4
Pioneer	9202		-	(5)	53.8	_	_	50.9	<u> </u>	_	54.8		(2)	68.8	61.8	(2)	-6	37	1.4
Pioneer	9251	60.3	49.7	(8)	51.8	43.5	(2)	62.2	* 48.0	(2)	57 8	* 53.7	(4)	69.3	53.7	(4)	0	38	1.5
Pioneer	9271													74.7	54.5		4	37	
			51.4	(10)	55.2	48.7	(4)		* 52.0			* 54.5				(3)			2.3
Pride	B152		45.1	(14)	50.5	45.9	(3)		* 45.2			* 45.2		59.5	45.2	(5)	-8	36	1.1
Prosoy	PS138		60.4	(5)	52.9	-		55.1				63.7		76.0		(2)	-7	40	1.8
Prosoy	PS210	55.9	48.9	(15)	46.8	47.1	(3)	62.0	* 49.3	(7)	45.9	49.6	(5)	68.9	49.6	(5)	-1	41	1.9
Prosoy	PS246A	63.0 *			56.7	-		54.9	-	- 1		* 70.2			* 70.2	· · ·	3	41	3.0
Rupp	Exp 29726	61.7 *			58.6	-		57.0				* 65.5		73.3	65.5	(2)	0	37	2.3
Rupp	RS2300	54.7		(21)	51.9	46.1	(4)		* 46.2	N- /		45.0		63.9		(8)	-1	43	1.9
Rupp	RS2460P	64.0 *		(15)		* 49.2		53.7	44.4	(5)		* 48.2			* 48.2		7	44	3.0
Stine	2710E Brand	57.2	49.0	(8)	52.2	46.4	(2)	53.6	44.5	(2)	48.7	52.5	(4)	74.2	52.5	(4)	2	43	2.4
Stine	2750 Brand	61.5 *		_	58.8		-	56.5			52.4	65.4	(2)	78.4	* 65.4	(2)	2	36	2.3
Terra	275E	62.7 *			55.7			55.9	* ·		59.6	* 69.6	(2)	79.6	* 69.6	(2)	7	41	3.2
Terra	Decathlon Brand	60.2			50.8			51.0	-		67.2	* 69.5	(2)	71.9	69.5	(2)	0	40	2.7
Terra	Hurdle Brand	50.8	44.1	(8)	44.2	40.9	(2)	46.3	41.1	(2)	47.6	47.2	(4)	64.9	47.2	(4)	0	38	1.6
Тегга	Olympian Brand	54.6	49.5	(5)	43.8	36.9	(2)	45.8	-	-	60.8	* 64.3	(2)	67.8	64.3	(2)	3	40	2.2
Terra	Runner Brand	49.9	42.7	(10)	47.6	42.9	(2)	50.9	37.1	(2)	40.6	44.5	(4)	60.6	44.5	(4)	-5	41	2.3
Terra	Sprint Brand	62.2 *				* 49.2			_			* 67.0		67.5		(2)	7	43	3.1
Voris	Exp 2624				55.9			56.9	·			* 68.6			* 68.6		1	42	2.5
Voris	V207	53.1		(23)		48.1	(4)		45.6	(10)		46.1			46.1	(9)	4	43	2.7
Voris	V311		48.1	(12)	47.9	44.5	(4)		42.7			* 54.3			* 54.3		6	41	2.9
	Test mean	57.74			53.60			53.19			56.22			69.36			23.8	40.2	2.34
	CV	8.8%			11.19			13.1%			14.7%			10.0%			9.0%	6.6%	
	LSD.05	7.07			10.43			11.64			13.95			11.04			3.0	3.7	0.68
	05				10.45														0.00

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

Brand	Entry	Yield 1987 Avg. (n)			Maturity Date Dev.		Height Inches	Lodging Score
Public	BSR 101	64.3	45.5	(3)	10-1	12	39	1.7
Public	Corsoy 79	65.5	44.3	(4)	10-1	12	38	2.0
Public	Dassel	51.9	41.7	(4)	9-20	1	29	1.0
Public		50.6	42.0		9-15	-4	34	1.4
Public	Dawson Hardin	58.9	42.0	(6) (4)	10-1	12	39	1.4
i uone	Thartan	50.7	45.1	(4)	10-1	12	57	
Public	Hodgson 78 †	54.9	42.6	(5)	9-19	0	35	1.1
Public	Ozzie	45.6	37.0	(5)	9-12	-7	25	1.0
Public	Sibley	56.6	44.2	(2)	9-23	4	37	1.8
Public	Simpson	55.4	42.5	(5)	9-15	-4	33	1.7
Public	Weber 84	60.6	41.8	(3)	9-28	9	40	2.4
				(-)				
Agripro	AP1776	56.9			9-27	8	35	1.1
Agripro	Ex 1989	75.3 *			10-1	12	40	2.1
Asgrow	A0949	55.5	42.0	(2)	9-17	-2	36	1.4
Asgrow	A1525	51.8	40.6	(3)	9-19	0	30	1.1
Asgrow	A1937	52.3	45.7	(4)	9-24	5	38	1.3
Callabara	C100 Date d	50.2	40.0	(2)	0.00	0	21	0.0
Callahan	6180 Brand	59.2	49.2	(2)	9-28	9	31	0.9
Dairyland	DSR-128	52.8	47.3	(2)	9-24	5	31	0.9
Dairyland	DSR-135	56.1	40.2	(5)	9-21	2	34	1.6
Dairyland	DSR-155	57.1			9-29	10	37	1.0
Dairyland	DSR-171	60.2	43.8	(4)	10-2	13	45	2.4
DeKalb-Pfizer	CX187	62.9			9-29	10	35	1.0
					9-29	10	31	0.9
Diehl Fields	DF-101 Brand	58.7		(2)				
Funk	G3197	56.4	44.4	(2)	9-30	11	31	0.9
Garst	8011	61.4			9-23	4	34	2.6
Garst	8101	53.6			9-28	9	40	1.3
Glenn-Garno	1800	60.3			9-27	8	33	1.1
Golden Harvest	H-1170 Brand	56.6			9-26	7	33	1.3
GLH	GL1900 Brand	59.2	42.7	(3)	10-1	12	37	1.3
GLH	GL1999 Brand	64.2			10-1	14	43	2.3
Lakeside States	116	51.8	42.8	(2)	10-3	13	39	1.3
Lakeside States	110	51.0	42.0	(2)	10-2	15	22	1.5
Kaiser / Estech	156	61.6			9-29	10	34	0.9
Northrup King	S15-50	58.3	42.3	(3)	9-26	7	43	1.3
Pioneer	9181	57.1			9-27	8	33	1.0
Pride	B152	55.0	43.2	(2)	9-26	7	36	0.9
Prosoy	PS138	66.8 *			9-30		39	1.3
Тегга	Runner Brand	60.7	44.6	(2)			43	1.9
				(2)	,-2,	10	-+5	1.7
	Test Mean	57.95			25.8	6.8	35.9	
	CV	8.4%			9.0%		7.1%	
	LSD.05	8.61			4.1		4.6	0.70

* Not significantly different from the highest yield in the column.

Ξ

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Issued in furtherance of Cooperative Extension work in agriculture and home economics, acts of May 8, and June 30, 1914, in cooperation with the U.S. Department of Agriculture. W.J. Moline, Director, Cooperative Extension Service, Michigan State University, E. Lansing, MI 48824.

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