

# 1980 MICHIGAN Soybean Performance Report

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This bulletin provides information to farmers on the relative performance of many varieties available in Michigan. Comprehensive variety trials were conducted in the Lower Peninsula at 2 locations: southeastern and central Michigan. Smaller trials were conducted in 4 Lower Peninsula and 2 Upper Peninsula areas. Results are presented here to help producers select varieties for planting in 1981.

## Testing Procedure

Commercial entries were obtained voluntarily from seed companies or their representatives. Names and addresses of these companies and their varieties are given in Table 10. Seed of public varieties was supplied by the Michigan Foundation Seed Association. The 2 comprehensive trials were located in Gratiot and Lenawee Counties, the 6 smaller trials in Antrim, Delta, Menominee, Sanilac, Shiawassee and St. Joseph Counties.

Extension and farmer cooperators, planting and harvesting dates, fertilization practices, and soil management groups at the 8 locations are listed in Table 1.

At all but the Sanilac and St. Joseph locations, each entry was a plot of four rows, 17 feet long. Row spacing was 28 or 30 inches and seeding rate was approximately 8 viable seeds per foot of row. Planting depth was 1 1/2 inches. Each entry was replicated either three or four times and randomized in the field. Thirteen feet of each of two center rows of a plot were harvested for yield determination. In Sanilac County, 15" rows were planted at 5 seeds per foot of row; 4 rows of 8 planted rows were harvested. In St. Joseph County, varieties were planted in 10", 20" and 30" rows at 3, 5, and 7 seeds per foot of row respectively. Four-year yield data are shown for varieties in the two comprehensive trials. Previous years' trial locations were as follows: 1978 and 1979—Monroe and Gratiot Counties; 1977—Monroe and Eaton Counties. Testing procedures in previous years were similar to those in 1980.

## Evaluation of Characteristics

Descriptions of varietal characteristics are given below.

*The authors acknowledge Elizabeth Sutherland, Botany and Plant Pathology Dept. for her ratings of diseases in the Shiawassee County trial.*

**Yield**—Harvested seed was dried to a uniform moisture. Yields were expressed in bushels per acre at 13% moisture.

**Maturity Date**—An entry was considered mature when the pods had turned brown and would crack under finger pressure. Dates were recorded by month and day.

**Lodging**—Lodging ratings were as follows: 1 = all plants upright; 2 = slight lodging; 3 = plants lodged at 45° angle; 4 = severe lodging; 5 = all plants completely flat. The ratings were made just prior to harvest.

**Height**—Plant height was measured in inches from the soil surface to the top node of the main stem. The measurement was made in advance of harvest.

**Seed Size**—The number of seeds per pound was determined as an expression of seed size. The determination of seeds per pound was made on cleaned seed.

## Results

Tables 2 through 9 show results of the 1980 variety trials. Values given are averages of all replications at each location.

Growing conditions were extremely variable among locations. Excessive rain caused some severe lodging in the Lenawee, Sanilac and Gratiot County trials. Extremely dry weather resulted in poor varietal performance in Antrim County.

LSD (least significant difference) values for yield are presented at the bottom of Tables 2 through 9. Two varieties that may have similar genetic potential for yield may nevertheless differ in yield because of variations in soil fertility and other environmental characteristics among plots at trial locations. LSD values can be used to determine if two varieties actually differ in their genetic potential for yield. If the difference between two varieties is greater than the LSD (.05) value, there is 95% or greater probability that those two varieties actually differ in performance. For example, in the Sanilac County trial (see Table 7) the LSD value is 6.6 bu/A. Hardin yielded 48.8 bu/A whereas Gnome yielded 40.9 bu/A. The difference is 7.9 bu/A which is greater than the LSD value, thus Hardin performed significantly better than Gnome. Conversely, the yields of Hardin and Harcor differ by only 4.8 bu/A which is less than the LSD value. Therefore, the small difference between these two varieties could be the result of environmental factors or experimental error.

## Selecting a Variety

Scientific yield trials on an individual's farm for several years would provide the best information on variety performance. Because such trials are impractical for each farmer to conduct, results of variety trials conducted by Michigan State University in combination with other helpful information and past experiences can be used by farmers to select a variety.

The primary consideration in selecting a variety is harvestable 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 important to select a variety with a proper maturity date. From past weather data, farmers can determine the percent probability of the first fall frost. Choose a variety that will reach maturity (see maturity date definition) before the average date of the first damaging frost. 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 are planted in soybeans, growing varieties of different maturities provides 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 potential 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 problems combining these beans may want to 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 based on number of seeds per foot of row eliminates seed size bias.

Many diseases can be found in soybean fields in Michigan. The diseases which contribute most significantly to yield reduction are seed and seedling diseases and root rot and stem rot diseases. Root rots of

soybeans are generally recognized when plants prematurely turn yellow, wilt or die. Less noticeable is the yield reduction that occurs when root rot destroys part of the root system and reduces the uptake of water and minerals, 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 rotation.

*Phytophthora* root rot affects young seedlings as well as older plants. This is reflected in reduced stands as well as disease symptoms such as yellowing, wilting or dying of older plants of susceptible varieties. Ratings in Table 8 show how race 1 of the fungus affects susceptible and resistant varieties. Differences in yield among varieties in Table 8 may reflect the presence of root rot, and/or varietal differences other than root rot resistance.

New varieties with resistance to one or more diseases are being developed, particularly varieties resistant to *Phytophthora* root rot. Consult seed dealers or Cooperative Extension Service personnel for information on varietal disease resistance characteristics.

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 in following years.

## Use of Data

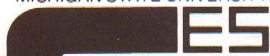
All data presented, except the 1977-80 yield averages, are of varietal performance in 1980. Order of the varieties in no way implies superiority of one over another.

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

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The authors regret any errors that may appear in this bulletin.

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**Table 1. Variety Trial Information.**

County	Cooperative Extension Service Cooperator	Farmer Cooperator	Address	Soil Mgt. Group	1980 Planting Date	Fertilizer	1980 Harvest Date
ANTRIM	Burton Stanley	Dick Shiels	Rt. 1 Elmira	5a	5-27	200 lbs. 0-0-60	10-22
DELTA	Don Pellegrini	James Collins	Fayette	2.5b	5-27	300 lbs. 6-24-24	10-9
GRATIOT	Dan Rossman	Clarence Reeves	2621 N. Baldwin Rd., Ithaca	2.5c	5-22	200 lbs. 6-24-24	10-23
LENAWEE	Paul Nevel Monroe Co.	Ivan. Bros. Farm	6500 Downing Hwy., Britton	1.5c	5-14	150 lbs. 6-24-24	10-16
MENOMINEE	R. A. Breyer	Matt Koch	Stephenson	2.5a	6-4	300 lbs. 6-24-24	10-9
SANILAC	Rex Sieting	Thomas Taylor	1381 Germania Rd., Marlette	2.5c	5-26	300 lbs. 0-0-60 100 lbs. 42-0-0	10-28
SHIAWASSEE	Dick Austin	Leo Shuman	5547 S. Byron Rd. Durand	2.5b	5-28	200 lbs. 9-19-19	10-28
ST. JOSEPH	Fred Henningsen	Bud Marantette	Mendon	4.0a	5-24	none	9-30

**Table 2. Southeastern Michigan. 1980—Lenawee County**

Variety	1980 Yield (Bu/A)	1977-1980 Avg. Yield (Bu/A)	Maturity Date	Lodging	Height (inches)	Seed Size (seeds/lb)
<b>Early to Medium Maturity</b>						
Evans	46.1	35.9	9-11	2.0	33	2817
Coles	49.7	37.5	9-22	4.0	42	2439
Weber	49.3		9-21	4.0	40	3516
Hark	46.7	37.6	9-24	3.2	39	2387
Hodgson 78	51.7		9-18	2.8	36	2637
Hardin	54.2		9-23	3.2	39	2926
Dairyland DSR-141	48.1		9-16	2.8	41	2817
Dairyland DSR-171	56.3		9-23	3.2	43	2506
SRF 150 P	51.1	40.7	9-26	3.5	41	2733
SRF 69-707-25	47.1		9-12	1.9	31	3263
SRF 72-22970	46.5		9-14	2.5	29	2817
NK S1346	55.2	40.1	9-20	1.8	30	2452
Smith-Douglas SD 619	50.7		9-19	2.8	38	3194
Payco PS 0011	47.8		9-10	2.4	33	2800
Payco PS 0019	48.3		9-18	2.8	38	3024
Pfizer CX 155	51.6	44.3*	9-23	3.2	39	2783
ProSoy 104	51.0	45.5*	9-18	3.0	42	2945
ProSoy E1193	50.9		9-20	3.0	41	2622
Jacques 98	48.5	38.1*	9-24	3.3	42	2716
Asgrow A1564	48.0	42.2	9-20	3.3	39	2492
Callahan 9160	53.5		9-19	2.7	36	2733
Rupp RS137	52.7		9-18	3.1	35	2733
Agripro AP10	52.8	43.3	9-21	2.7	35	2800
Andersons APS 150	41.1	38.9*	9-18	3.0	39	3107
Garno SB 90	50.9		9-20	3.0	41	2945
LSD (.05) =	8.2					
<b>Medium to Late Maturity</b>						
Corsoy 79	55.0		9-24	3.6	45	2817
Corsoy	50.7	44.8	9-24	3.6	45	2800
Century	59.8		9-29	2.8	42	2268
Amsoy 71	56.6	43.4	9-25	3.8	46	2400
Harcor	53.4		9-24	4.2	46	2926
Wells II	54.9		9-23	2.3	41	2439
Nebsoy	50.7		9-23	2.2	39	2452
Beeson	54.4	42.8	9-26	3.4	43	2043
Beeson 80	54.9		9-27	3.0	41	2150

(Continued)

Lenawee County (continued)

Variety	1980 Yield (Bu/A)	1977-1980 Avg. Yield (Bu/A)	Maturity Date	Lodging	Height (inches)	Seed Size (seeds/lb)
Gnome	53.5		9-29	1.0	22	2548
Vickery	59.7		9-23	4.2	47	2653
Amcor	53.8		9-25	3.3	43	2052
Harosoy 63	52.0	40.3	9-23	4.2	46	2400
Callahan 9250	53.1		9-28	3.5	46	2314
Callahan 9330	64.5		10-6	3.5	47	2439
Callahan 8220	59.2		9-25	3.3	43	2653
Callahan G5280	59.6		10-6	3.9	49	2479
Rupp RS2300	54.3		9-22	2.5	42	2439
Agripro AP200	53.5		9-22	3.1	39	2534
Agripro 18	59.9	43.1	9-21	3.2	39	2452
Migro HP 2020	58.4		9-24	3.3	41	2386
Andersons APS 200	57.9	45.2	9-25	3.6	45	2452
Andersons APS 300	51.5		10-6	3.6	48	2577
Hyland 7902	51.5		9-23	4.0	43	2766
Falcon	53.9		9-24	2.6	43	2439
Dairyland DSR-207	51.5		9-26	3.1	42	2291
Dairyland DSR-232	57.9	45.8*	9-30	3.4	46	2700
SRF 74-5897	53.5		10-4	3.3	49	2749
SRF 200	50.1	42.6	9-27	3.9	47	2700
SRF 250	56.5		9-27	2.4	41	2926
GLH 2250	48.3		9-24	3.2	44	2520
VR Duke	48.1		9-25	2.8	44	2350
VR Burr	53.4	41.9	10-3	3.1	40	2465
Jacques J-105	57.1		10-2	2.8	43	2303
Jacques J-102A	63.0		9-24	3.7	43	2684
Jacques 104	63.6		9-25	3.8	45	2607
Asgrow A2858	55.2		9-30	3.0	36	2160
Asgrow A2656	51.5	44.2*	9-24	3.8	46	2506
Asgrow A2575	64.9	49.3*	9-25	2.8	45	2492
Asgrow A2440	57.1	46.3*	9-24	3.7	44	2835
Payco PS 0031	50.1		9-29	3.5	42	2034
Payco PS 0021	63.6		9-24	3.0	41	2548
Voris B202	56.6		9-24	3.0	41	2653
Voris 285	58.3		10-5	4.1	49	2314
Voris X37	52.3		9-25	3.0	40	2350
Voris 247	56.8		9-26	1.8	38	2257
Voris 207	52.9		9-21	3.1	44	2783
Pfizer CB 200	56.8		9-25	3.9	43	2733
Pfizer EC 9821	62.6		10-5	3.3	43	2684
Pfizer EC 7717	53.7		9-28	2.7	40	2766
Pfizer CB 244	54.4		9-27	3.2	42	2465
Pfizer CX 290	50.9		9-30	3.1	44	2350
Pfizer CX 276	59.4		9-29	3.4	44	2637
Gries G 240	59.6		9-24	2.5	44	2338
Gries SRF 200	58.2		9-26	3.7	44	2653
Garno SB 95	56.9		9-25	3.3	48	2400
Garno SB 100	53.1		10-3	3.1	43	2452
ProSoy 201	55.3		9-24	2.5	43	2548
ProSoy 210	63.2		9-26	3.0	43	2202
ProSoy 266	52.4		10-3	2.9	43	2350
ProSoy 222	58.1		9-25	3.1	46	2350
ProSoy 234	61.0		9-28	3.1	41	2081
ProSoy E27146	51.9		9-24	3.4	44	2700
ProSoy E3302	62.4		10-3	3.0	46	2439
ProSoy E2207	53.1		10-3	3.2	46	2338
ProSoy E2294	58.6		9-27	2.6	42	2246

(Continued)

**Lenawee County (continued)**

Variety	1980 Yield (Bu/A)	1977-1980 Avg. Yield (Bu/A)	Maturity Date	Lodging	Height (inches)	Seed Size (seeds/lb)
NK S2596	56.5		9-25	2.3	39	2257
NK Multivar 52	58.1		9-27	3.2	43	2592
NK S1492	57.8	44.4	9-25	3.0	40	2439
NK S1474	50.2	42.6	9-29	3.7	44	2684
King Grain B216	60.4	46.1	9-25	3.2	41	2413
King Grain B220	60.0		9-26	2.8	43	2534
Smith-Douglas SD 724	55.1		9-25	3.5	44	2452
Smith-Douglas SD 834 Imp.	53.6		10-7	3.7	48	2303
Smith-Douglas SD 830 NR	55.2		10-8	3.8	55	2783
Gutwein 210	55.4		10-5	2.9	44	2303
Gutwein 221	49.0		10-5	3.4	47	2908
Gutwein 220	58.9		10-1	3.4	47	2668
LSD (.05) =	8.1					

\* 3 year average only

**Table 3. Central Michigan. 1980—Gratiot County**

Variety	1980 Yield (Bu/A)	1977-1980 Avg. Yield (Bu/A)	Maturity Date	Lodging	Height (inches)	Seed Size (seeds/lb)
<b>Early to Medium Maturity</b>						
Evans	46.6	39.8	9-16	1.2	34	2637
Coles	49.2	41.6	10-1	2.8	43	2363
Weber	53.6		9-24	2.8	39	3044
Hark	51.6	40.0	10-1	2.7	42	2637
Hodgson 78	47.7		9-22	1.4	35	2684
Hardin	58.4		9-27	2.8	41	2668
Jacques J-84A	48.4		9-19	2.3	42	2733
Jacques J-88	56.4		9-23	1.5	39	2548
Jacques 98	50.3	45.1*	10-2	3.1	42	2783
Asgrow A1564	52.8	43.1*	9-24	2.3	41	2465
Payco PS 0019	49.7		9-26	2.2	37	2835
Payco PS 0011	45.0		9-21	1.0	36	2684
ProSoy 104	54.8	45.8*	9-23	2.0	39	2577
Voris X47	47.8		9-23	2.7	39	2852
Voris B100	50.4	46.7*	9-25	2.0	37	2563
Pfizer CX155	52.0	44.2	10-2	3.7	43	2668
NK S1346	48.8	42.0	9-25	1.3	34	2439
NK S0512	43.3		9-14	2.2	36	3436
NK 503149 exp.	48.8		9-24	1.8	38	2465
Callahan 9160	55.9		9-25	2.5	40	2592
Rupp RS137	50.4		9-25	1.4	36	2534
Agripro AP10	54.2	46.3*	9-23	2.0	37	2653
Andersons APS 150	52.2	45.0*	9-27	2.7	39	2766
Hawk	55.4		9-23	2.3	34	2268
Hyland 8005	49.9		9-18	1.5	38	2817
Dairyland DSR-141	46.1	43.4*	9-23	2.0	42	2303
Dairyland DSR-171	49.7		10-1	3.0	47	2700
Dairyland DSR-120	50.4		9-20	1.2	36	2548
SRF 150 P	51.5	44.9	10-2	3.0	43	2733
SRF 69-707-25	47.7		9-19	1.8	36	3335
SRF 72-22970	51.8		9-25	2.2	38	2637
VR Erik	54.9		10-1	3.7	46	2534
LSD (.05) =	9.3					

(Continued)

**Gratiot County (continued)**

Variety	1980 Yield (Bu/A)	1977-1980 Avg. Yield (Bu/A)	Maturity Date	Lodging	Height (inches)	Seed Size (seeds/lb)
<b>Medium to Late Maturity</b>						
Corsoy 79	56.6		9-30	2.8	44	2749
Corsoy	52.0	42.4	10-2	2.7	43	2733
Century	55.8		10-5	3.0	42	2426
Amsoy 71	54.5	41.8	10-5	2.8	45	2426
Harcor	56.0		10-2	3.1	42	2700
Wells II	53.0		9-30	1.8	42	2783
Nebsoy	51.5		10-5	2.2	40	2387
Beeson	57.4	45.7	10-6	3.1	42	2375
Beeson 80	47.0		10-6	3.0	40	2465
Gnome	46.8		10-8	2.3	28	2749
Vickery	52.9		9-30	3.5	44	2653
Amcor	46.4		10-6	3.5	44	2577
Harosoy 63	48.6	36.0	9-30	3.0	44	2303
Callahan 9250	48.0		10-7	3.3	43	2653
Callahan 8220	56.1		10-3	2.8	43	2479
Rupp RS2300	51.2		10-1	2.3	43	2592
Agripro AP200	55.0		9-27	2.0	40	2563
Agripro 18	53.2	43.0	10-2	2.7	42	2577
Migro HP 20-20	54.2		10-1	2.2	40	2314
Andersons APS 200	49.0	42.2	10-3	3.2	43	2492
Hyland 7902	54.1		9-30	2.8	42	2852
Falcon	52.9		9-29	2.0	43	2439
Dairyland DSR-207	52.8		10-4	2.7	41	2375
SRF 74-5897	42.0		10-15	4.0	49	3128
SRF 200	53.1	41.6	10-9	3.3	47	2607
SRF 250	49.9		10-7	2.3	44	2891
GLH 2250	53.2		10-6	2.8	46	2314
VR Duke	44.6		10-1	3.3	44	2716
Jacques J-102A	47.9		10-2	3.0	40	2592
Asgrow A2656	46.7	44.8*	10-2	3.7	43	2749
Asgrow A2575	50.5	43.2*	10-2	2.7	45	2653
Asgrow A2440	51.7	41.7	10-4	3.0	41	2684
Voris B202	32.8		9-23	1.7	27	2653
Voris 247	58.3		10-3	2.0	40	2375
Voris 207	52.2		9-29	2.8	46	2668
Pfizer CB 200	50.2	43.7*	10-4	3.5	44	2817
Pfizer EC 7717	50.1		10-6	3.7	41	2835
Pfizer CX 290	45.4	41.8*	10-8	3.2	43	2749
Pfizer CX 276	49.0	40.0	10-9	2.8	39	2520
ProSoy 210	48.3		10-3	2.8	43	2668
ProSoy 222	48.7		10-5	3.2	45	2439
ProSoy 234	55.2		10-5	2.5	42	2303
NK S2596	62.3		10-2	2.2	39	2363
NK Multivar 52	51.6	46.7*	10-5	3.0	42	2653
NK S1492	48.7	41.8	10-7	3.2	44	2700
NK S1474	46.3	41.4	10-6	3.3	42	2800
King Grain B216	52.8	42.9	10-3	2.8	41	2733
King Grain B220	52.9		10-3	2.3	44	2479
Gutwein 210	39.1		10-13	4.0	45	2716
Gutwein 221	48.3		10-13	3.3	46	2817
Gutwein 220	54.4		10-9	2.8	45	2783
Gries G240	54.9		9-30	1.8	44	2534
Gries SRF 200	59.2		10-7	3.2	47	2492
LSD (.05) =	9.3					

\* 3 year average only

**Table 4. Antrim County\***

Variety	1980 Yield (Bu/A)	1979-1980 Avg. Yield (Bu/A)	Maturity Date	Height (inches)	Lodging
Ada	7.0	11.9	9-18	20	1.0
Altona	5.3	9.4	9-15	17	1.0
Clay	3.9	9.2	9-20	16	1.0
Maple Arrow	9.8	12.6	9-18	19	1.0
Maple Presto	4.4	—	9-09	17	1.0
McCall	6.7	12.7	9-17	17	1.0
Portage	7.3	12.4	9-18	20	1.0
Wilkin	4.7	9.6	9-22	15	1.0

LSD (.05) = Not Significant

\* Varietal comparisons are not valid due to extremely poor performance

**Table 5. Delta County**

Variety	1980 Yield (Bu/A)	1979-1980 Avg. Yield (Bu/A)	Maturity Date	Lodging	Height (Inches)
Maple Arrow	30.2	26.0	9/28	1.0	27
McCall	29.7	23.4	9/28	1.0	27
Altona	34.4	24.6	10/20*	1.7	25
Wilkin	34.6	18.8	10/06	1.7	24
Ada	31.9	—	10/20*	1.7	25
Clay	31.0	—	10/06	1.8	20

LSD (.05) = Not Significant

\* Estimated due to frost on 9/25/80

**Table 6. Menominee County**

Variety	1980 Yield (Bu/A)	Maturity Date	Lodging	Height (Inches)
Maple Arrow	40.2	9/28	2.5	32.5
Altona	32.6	10/12*	2.4	31.7
Clay	31.2	10/09	2.4	27.7
Wilkin	30.5	10/09	2.3	30.5
Ada	29.5	10/15*	2.5	36.0
McCall	29.3	9/28	2.1	32.0

LSD (.05) = 6.6

\* Estimated due to frost on 10/1/80

**Table 7. Sanilac County**

Variety	1980 Yield (Bu/A)	Maturity Date	Height (inches)	Lodging
Agripro 18	45.5	10-12	44	4.1
Amsoy 71	35.5	10-19	48	4.1
Asgrow 2440	45.2	10-14	47	5.0
Beeson 80	37.6	10-18	40	3.8
Century	35.8	10-18	46	3.4
Corsoy 79	41.8	10-18	45	4.6
Evans	46.4	9-28	39	3.4
Gnome	40.9	10-19	27	2.5
Harcor	44.0	10-13	45	4.4
Hardin	48.8	10-08	44	4.4
Hodgson 78	48.0	10-04	40	3.8
Jacques 98	39.9	10-13	47	4.8
Nebsoy	38.7	10-09	39	3.1
Peterson 1677	40.3	10-06	42	3.1
Pfizer CX155	39.7	10-13	45	4.8
SRF 150P	45.4	10-11	44	3.8
SRF 250	44.8	10-19	49	4.0
SRF 200	44.4	10-15	42	3.1

(Continued)

**Sanilac County (continued)**

Variety	1980 Yield (Bu/A)	Maturity Date	Height (inches)	Lodging
Stanton 210	43.6	10-14	45	4.6
Vickery	40.5	10-13	45	5.0
Voris B207	43.8	10-08	41	4.1
Weber	42.0	10-07	44	4.4
Wells II	36.0	10-12	41	2.9
LSD (.05) =	6.6			

**Table 8. Shiawassee County**

Variety	1980 <sup>1</sup> Yield (Bu/A)	Maturity Date	Height (inches)	Lodging	PRR <sup>2</sup>
Amsoy 71	36.5	10-1	38	3.1	0
Beeson	37.7	10-1	39	3.4	0
Beeson 80	39.5	10-2	37	2.3	0
Corsoy	26.2	9-28	33	1.6	14
Corsoy 79	34.9	9-29	32	1.9	0
Evans	28.1	9-19	28	1.3	0
Gnome	17.6	9-29	20	1.0	5
Harcor	38.1	9-29	38	3.3	0
Hardin	41.3	9-27	30	2.5	0
Hark	25.6	9-26	33	1.0	10
Hodgson 78	42.4	9-24	32	1.7	0
Vickery	36.5	9-26	34	2.8	0
Weber	27.8	9-24	28	1.5	23
Wells II	30.8	9-29	29	1.3	0
LSD (.05) =	9.0				

<sup>1</sup> Average of two replications only

<sup>2</sup> Number of plants per 26 ft. of row infected with *Phytophthora* root rot race 1.

**Table 10. Seed Sources**

Source	Brand	Entry
Public Releases		Hark, Harosoy 63, Corsoy, Corsoy 79, Beeson, Beeson 80, Amsoy 71, Hodgson 78, Evans, Coles, Wells II, Weber, Nebsoy, Hardin, Harcor, Century, Vickery, Maple Arrow, McCall, Altona, Ada, Clay, Wilkin, Portage, Gnome, Amcor, Maple Presto
The Andersons	Anderson	APS 150, APS 200, Maumee, OH, APS 300
Asgrow Seed Company	Asgrow	A1564, A2440, Kalamazoo, MI, A2575, A2656, A2858
Callahan Seeds	Callahan	8220, 9160, 9250, Westfield, IN, G5280, 9330
Dairyland Research	Dairyland	DSR-141, DSR-171, Clinton, WI, DSR-120, DSR-207, DSR-232
Garno Seed Company	Garno	S-B-90, S-B-95, Blissfield, MI, S-B-100
Great Lakes Hybrids	GLH	2250
Ovid, MI		
Gries Seed Farm	Gries	G240, SRF 200
Freemont, OH		
Gutwein Hybrids	Gutwein	220, 221, 210
St. Johns, MI		
Jacques Seed Company	Jacques	J-84A, J-88, 98, Prescott, WI, J-102A, 104, J-105

(Continued)

**Table 9. St. Joseph County**

	Row Space (inches)	IRRIGATED*				NON-IRRIGATED			
		1980 Yield (Bu/A)	Maturity Date	Height (inches)	Lodging	1980 Yield (Bu/A)	Maturity Date	Height (inches)	Lodging
Hardin	10	57.3	9-21	32	2.0	54.9	9-22	29	1.8
	20	51.2	9-19	31	2.2	48.1	9-21	29	1.8
	30	39.7	9-14	29	2.2	47.6	9-19	29	2.1
Hodgson 78	10	49.1	9-14	30	1.4	47.6	9-14	26	1.2
	20	40.8	9-10	28	1.6	41.2	9-12	27	1.1
	30	33.7	9-10	29	1.8	31.1	9-11	27	1.5
SRF 150P	10	56.0	9-21	32	1.9	45.1	9-20	26	1.0
	20	51.8	9-18	31	1.6	47.4	9-21	28	1.3
	30	46.1	9-19	31	1.8	44.0	9-20	29	1.5
SRF 200	10	60.4	9-24	36	2.7	49.3	9-23	29	1.6
	20	53.3	9-22	35	2.6	48.1	9-22	33	1.8
	30	45.6	9-21	35	2.5	45.5	9-23	32	2.3
Corsoy 79	10	59.2	9-24	35	2.5	54.9	9-23	28	1.6
	20	58.5	9-21	34	2.3	52.6	9-23	29	2.2
	30	49.4	9-22	34	2.5	44.8	9-22	30	2.1
Harcor	10	62.5	9-24	36	2.5	58.6	9-25	31	2.5
	20	57.3	9-23	32	2.3	50.1	9-23	29	2.1
	30	51.6	9-22	33	2.5	49.5	9-23	32	2.8
Nebsoy	10	48.5	9-18	30	1.4	47.4	9-20	25	1.3
	20	45.3	9-19	29	1.4	47.3	9-20	29	1.3
	30	42.6	9-19	30	1.7	40.6	9-19	27	1.6
Gnome	10	62.6	9-28	21	1.0	56.7	9-28	21	1.0
	20	60.5	9-27	21	1.0	54.8	9-28	20	1.0
	30	54.3	9-27	21	1.2	52.6	9-28	19	1.0
Beeson	10	50.8	9-23	33	2.2	51.7	9-24	29	1.4
	20	57.6	9-24	33	1.8	52.6	9-25	30	1.5
	30	47.4	9-21	31	2.1	48.6	9-23	30	1.7
Wells II	10	53.2	9-19	32	1.2	48.4	9-20	26	1.0
	20	50.4	9-19	31	1.2	45.6	9-19	27	1.0
	30	50.4	9-19	31	1.2	45.6	9-19	27	1.0
Avg. Yield		51.3				47.9			
LSD (.05) <sup>a</sup>		5.1				7.2			
LSD (.05) <sup>b</sup>		5.4				7.5			

LSD (.05)<sup>a</sup> is used to compare the yields between different row spacings of the same variety.

LSD (.05)<sup>b</sup> is used to compare the yields between different varieties of the same row spacing.

\* 1.5" irrigation water applied July 26

**Seed Sources (continued)**

Source	Brand	Entry
King Grain, LTD. Chatham, Ontario	King Grain	B216, B220
North American Plant Breeders Ames, IA	Agripro Migro	AP10, 18, AP200, Migro HP 20-20
Northrup King Co. Washington, IA	NK	Multivar 52, S0512, S1346, 503149 Exp., S1474, S1492, S2596
Payco Seeds Dassel, MN	Payco	PS0011, PS0019, PS0021, PS0031
Pfizer Genetics Windfall, IN	Pfizer Genetics	CX155, EC7717, CX276, EC9821, CX290, CB200, CB244
Pro-Seed Blissfield, MI	ProSoy	201, 222, 210, 234, 266, E27146, E-2294, E2207, E-3302, E-1193

**Seed Sources (continued)**

Source	Brand	Entry
Rupp Seed Farm Wauseon, OH	Rupp	RS2300, RS137
Smith-Douglas Fertilizer Co. Riga, MI	Smith- Douglas	S-D619, S-D724, S-D830NR, S-D834 Im- proved
Soybean Research Foundation Mason City, IL	SRF	150P, 200, 250, 69-707-25, 72-22970, 74-5897
W. G. Thompson & Sons, Ltd. Blenheim, Ontario		Hyland 8005 Hyland 7902 Falcon, Hawk
Voris Seeds, Inc. Glenhaven, WI	Voris	B100, B202, 207, 247, 285, X37, X47
V. R. Seeds, Inc. Plymouth, IN	V. R.	Erik, Duke, Burr