Michigan State Wheat Variety Trial: 2002

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Comments on the 2001 Wheat Crop

The 2001/2002 Michigan wheat crop appears to have generated a range from average to good yields and generally good test weight. Planting dates were sporadic due to a wet fall. Some wheat in the state was planted in mid November. Little winterkill occurred. Powdery mildew did not reach severe levels in most fields. Septoria leaf blotch was severe in some fields. Glume blotch was also present in some fields. Fusarium head blight (scab) was apparently not a major problem. Leaf and stem rust appeared soon after flowering and may have caused yield losses in some fields. Stripe rust was seen again this year in Michigan. Flowering occurred approximately 10 days later than last year although harvesting occurred about the same time as last year.

Multi-Year Performance Summary (Tables 1 and 2)

Tables 1 and 2 summarize performance of 47 varieties from 13 organizations including Michigan State University wheat breeding program. Adjacent to this narrative is a list of the names and contact information for those organizations. Each line in these tables has data for a single variety. The columns contain averages for a given trait and time period. Data for several entries in this trial are not presented here. However, the averages and statistical parameters in this report are based on the entire set of evaluated materials. **Comparisons are only valid within a column**. In some instances (eg. yield), data columns to the right of the 2002 data columns are multi-year averages. Only data for varieties included in the relevant years' tests are found here. Not all varieties have been tested in all years so the table has several blank cells. See the section titled 'Experimental' for details on how the trials were conducted and more detail on what the data in each column's data represent.

At the bottom of each table are the averages, L.S.D.s (least significant difference), and C.V.s (coefficient of variation) for each data column. L.S.D.s vary among traits and data sets (combinations of sites and years). Differences between means that are greater than the L.S.D. are very likely to reflect a genuine difference between the two varieties. If the difference between two means is smaller than the L.S.D. for that column, you should conclude that there is **no evidence that those varieties are different for that trait** in the years and sites considered. The C.V. is indicative of a trial's precision. Trials with low levels of error variation have lower C.V. values.

Single Site Yield Performance Summary (Table 3)

The first five columns in this table each contain yield (bushels/acre) data from one of the six sites harvested for yield this year. The last column contains the same across-site yield average found in Table 1. Each row in the table represents a single variety in the test.

Choosing Varieties

MSU makes no endorsement of any wheat variety or brand. Although wheat producers are always interested in how varieties perform in a given year and location, performance in a single year and location should never be used in selecting a variety to plant. It is best to select a variety on the basis of data from at least three years of testing. Varieties selected with such comparisons are more likely to perform well under a wide range of conditions. In any given year or at any given site, several varieties will usually fall into the group of 'highest yielding' varieties. The composition of that group, and the identity of the absolute "winner", can and does change from location to location and year to year. This means that the single best variety cannot be determined in advance for a specific site. However, you can identify a group of

varieties that is likely to contain the winners in the upcoming season. We recommend that you plant two or more varieties.

Experimental

The 2002 State Wheat Variety Trial was planted at seven county sites: Lenawee, Saginaw, Midland, Huron, Ionia, Sanilac, and Ingham. Appendix A (below) presents information on each of the county sites. Plots were 11 feet long and had 7 rows at 6" row spacing. The trial was designed and executed as four replication alpha-lattice (12 blocks of 5 plots each). All seed was treated but the chemicals and rates used varied. Seeding rates per linear foot of row were standardized to the rate that would achieve 1.8 million seeds per acre in a solid stand planted in 6" rows. Fall fertilizer application varied with cooperator practice. Spring nitrogen was applied as urea (90 lbs/acre actual N) at green-up. No foliar fungicides were applied. Three sites were sprayed with an insecticide to control armyworms. Weeds were controlled chemically as needed. All plots at a site were harvested on a single day. Yield was calculated using the entire area of the plot including the wheel tracks between plots. That approach tends to underestimate yield.

Yield, test weight, and grain moisture data were acquired electronically on the plot combine at the time of harvest. All scores are based on a 0-9 scale, where 0 is the best possible score. Plant height is reported as the distance from the ground to the tip of average heads in a plot in inches and was taken in Midland and Saginaw counties. Lodging data was taken at the Midland and Saginaw locations and was given a score of 0-9 where 0 equals all plants are erect. Flowering date data was taken at the Midland and Ionia County plots. The flowering date indicates the average number of days past January 1st in which that variety reached the point where ½ of its heads were flowering. Powdery mildew is reported as the average percent of the flag leaf infected. This data was recorded from Lenawee County. Powdery Mildew is also reported as a score (0-9), where 0 indicates that powdery mildew was not present. Leaf rust is reported as the average percent of the flag leaf area infected. This data was recorded from Lenawee County. Barley yellow dwarf scores were recorded from four sites. A BYD score of zero indicates that there was not any BYD symptoms. Septoria scores were taken at Ingham, Lenawee, Sanilac, and Saginaw Counties. A septoria score of zero indicates that no septoria was found in the plot. Fusarium Head Blight (scab) reactions were evaluated in a nursery at MSU's Clarksville research station. Plots were inoculated with scab spores, and plots were kept wet throughout the flowering period with overhead irrigation. The extent of scab infection is a function of both the number of heads with any symptoms, and how severe the infection is on the infected heads. It is believed that independent genetic mechanisms control these two aspects of response to scab pressure. Each wheat head is comprised of roughly 14-22 "spikelets", which bear the developing seed and are the site of visible scab infection. Here, we report **scab incidence** as the average percent of heads infected per plot, and **scab severity** as the average percent of spikelets infected when considering infected heads only. The product of severity and incidence (% severity x % incidence) would represent an estimate of the percent of all spikelets showing scab symptoms for a given variety. The milling and baking quality data are based on grain from the 2001 State Variety trial. Flour yield is the ratio of the weight of extractable flour to the weight of milled grain, expressed as a percentage. "Softness Equivalent" is an indirect measure of the sample's grain hardness. Soft wheat varieties generally have softness equivalent values greater than 50. Sprouting data is based on greenhouse evaluation of 5 heads from four replications at the Saginaw county site. Heads were collected within 24 hours of harvest and dried for six days. Scores were taken after the heads were subjected to near-continuous misting for five days, where zero indicates that there was no sprouting present.

Six of our experimental sites are on private farmland. We are extremely grateful to those growers for accommodating our work and all of the associated inconveniences. Questions and comments regarding the research reported here should be directed to Rick Ward (517-285-9725). This information, along with results from previous years, can also be accessed through the Web at http://www.msue.msu.edu/msuwheat/Variety_Results.html

2002 Michigan State Wheat Variety Trial

Table 1

Multi-year data are the most informative. MSU makes no endorsement of any variety or brand.

Name	Grain Color	Yield: Bushels/Acre				Test Weight: lbs/bu				Percent Grain Moisture at Harvest		Plant Height (Inches)		Lodging Score (0-9)		Flowering Date (Days Past Jan. 1)		Septoria Tritici (Leaf Blotch) Score (0-9)		BYD Score (0-9)	Powdery Mildew Score	Powdery Mildew Percent Infection on the Flag Leaf		Leaf Rust Percent Infection on the Flag Leaf	
			Multi-Year Averages				Multi-Year Averages				2-yr Avg		2-yr Avg		2-yr Avg		2-yr Avg		2-yr Avg				2-yr Avg		2-yr Avg
		2002	2 yr 01-02	3 yr 00-02	4 yr 99-02	2002	2 yr 01-02	3 yr 00-02	4 yr 99-02	2002	01-02	2002	01-02	2002	01-02	2002	01-02	2002	01-02	2002	2002	2002	01-02	2002	01-02
Mitchell	R	71.5	71.9	---	---	59.6	60.1	---	---	12.1	12.1	39.9	40.0	4.4	4.3	159.0	153.3	5.3	4.9	1.5	8.9	2.8	1.8	1.8	1.4
Patton	R	78.9	76.7	80.2	80.2	60.8	60.6	59.9	60.1	12.4	12.2	41.0	39.6	5.1	4.7	158.2	152.9	4.8	4.5	1.5	8.2	2.7	1.7	0.7	0.8
CM 21035	R	83.9	---	---	---	60.1	---	---	---	12.3	---	40.7	---	4.6	---	158.1	---	4.0	---	1.3	1.8	0.7	---	4.1	---
Genesis 9953	R	76.2	74.8	79.1	---	58.6	59.0	58.4	---	11.7	11.8	41.2	40.6	5.7	5.7	159.4	154.2	4.5	4.1	1.5	5.1	0.6	0.3	0.4	0.4
Genesis R022 Exp	R	77.8	---	---	---	60.8	---	---	---	12.5	---	40.9	---	5.1	---	158.4	---	5.1	---	2.0	7.3	2.5	---	0.3	---
Genesis R026 Exp	R	73.0	---	---	---	59.5	---	---	---	11.6	---	40.7	---	5.9	---	158.6	---	5.7	---	2.3	5.6	1.3	---	0.3	---
Genesis R036 Exp	R	75.0	---	---	---	59.9	---	---	---	12.4	---	39.6	---	7.7	---	160.9	---	3.0	---	1.3	5.3	0.0	---	0.7	---
Genesis R037 Exp	R	76.9	---	---	---	57.8	---	---	---	12.1	---	41.8	---	5.2	---	160.5	---	4.8	---	0.5	3.8	0.2	---	0.7	---
Richland	W	78.9	---	---	---	59.5	---	---	---	12.8	---	43.5	---	3.0	---	160.2	---	3.8	---	1.5	1.3	0.3	---	0.8	---
W026	W	71.5	---	---	---	57.2	---	---	---	12.4	---	43.5	---	5.5	---	162.0	---	4.8	---	1.0	2.1	0.1	---	0.3	---
W036	W	77.1	---	---	---	58.7	---	---	---	13.5	---	45.5	---	6.8	---	161.2	---	5.1	---	1.8	3.4	0.4	---	0.5	---
Superior	W	73.7	74.6	78.5	78.7	58.3	57.9	57.3	57.9	13.0	13.6	43.2	43.3	3.7	4.0	161.5	156.9	4.2	2.8	2.3	3.5	0.6	0.3	1.7	1.2
Caledonia	W	82.5	78.3	82.5	83.7	59.0	58.2	57.9	58.1	12.3	12.4	39.8	38.6	2.0	1.6	160.2	155.5	4.2	4.0	1.3	5.7	1.3	0.9	2.0	1.6
Navigator	R	77.9	78.0	80.4	81.8	57.8	57.5	57.0	57.0	11.6	12.0	38.3	37.5	2.7	2.1	160.3	154.4	5.4	4.7	1.8	4.6	0.9	0.5	0.4	0.9
AC Mountain	W	79.9	76.2	79.2	79.7	58.0	58.1	57.9	58.1	11.8	11.9	43.5	43.7	3.9	4.2	160.8	156.3	4.7	3.6	2.0	5.6	1.9	1.0	1.0	3.3
AC Ron	W	76.2	74.7	78.7	78.5	58.2	58.0	57.8	58.1	12.1	12.4	44.9	45.1	4.5	4.8	161.0	156.3	4.7	3.5	1.5	4.9	0.9	0.5	1.0	1.3
Autumn	R	84.3	82.3	---	---	58.7	59.0	---	---	11.6	11.6	39.2	38.7	6.4	6.3	160.0	154.4	2.2	3.1	0.8	0.8	0.5	0.3	3.5	3.5
Bravo	R	86.1	80.6	81.0	---	61.0	61.0	60.1	---	12.5	12.3	40.8	39.6	4.8	3.2	158.0	152.5	4.1	4.5	2.0	5.5	0.0	0.0	3.4	2.8
Cedar	R	85.2	83.5	---	---	59.2	59.1	---	---	13.0	13.1	41.6	41.5	6.7	7.2	160.2	155.2	2.6	2.2	2.3	0.8	0.0	0.0	1.7	1.3
Hopewell	R	85.0	79.7	83.4	83.9	59.7	60.0	59.6	59.8	12.3	12.1	40.2	39.2	1.4	1.4	160.2	154.9	4.3	4.4	1.0	4.8	0.5	0.3	1.6	1.1
Harus	W	78.4	75.4	78.1	78.3	59.3	59.0	58.7	58.9	11.9	11.9	44.1	44.3	2.9	2.8	161.0	155.9	3.8	3.4	2.3	3.7	0.7	0.4	1.2	1.3
INW0101	R	84.1	---	---	---	61.4	---	---	---	12.7	---	37.4	---	2.1	---	158.1	---	3.4	---	0.8	2.2	0.5	---	0.0	---
Lowell	W	72.7	69.4	73.8	74.0	57.2	57.6	57.5	57.6	11.5	11.3	44.3	43.4	7.4	7.7	160.2	154.5	5.0	4.3	1.5	6.9	1.7	0.9	1.2	1.6
Pearl	W	82.0	79.7	81.9	---	58.9	59.3	58.9	---	12.0	12.1	41.1	40.3	7.4	6.9	160.1	154.6	4.0	3.6	0.8	2.2	0.0	0.0	0.2	0.3
OAC Ariss	W	76.4	69.8	74.7	75.5	59.9	56.9	57.2	57.8	12.4	14.9	41.8	41.1	4.1	3.3	161.8	158.4	4.6	4.6	1.0	5.9	0.7	0.6	2.0	4.6
Roane	R	83.4	80.8	84.3	84.0	62.1	62.3	61.6	61.7	13.0	13.2	38.4	37.6	7.2	6.4	159.6	153.7	2.7	2.6	0.3	1.4	0.4	0.2	0.9	0.7
Sisson	R	80.7	79.1	84.3	---	60.0	59.8	59.4	---	12.0	12.0	36.3	35.2	3.5	3.5	157.9	152.5	5.3	4.5	1.3	2.5	0.2	0.1	1.4	1.3
MSU Line D6234	W	79.5	76.7	79.8	80.4	60.5	60.1	59.7	59.8	13.0	13.2	41.5	41.1	6.3	5.3	160.6	155.8	3.4	2.9	1.8	5.5	1.0	0.6	1.8	1.6
MSU Line D8006	W	79.7	79.6	---	---	57.9	58.1	---	---	11.7	11.9	41.8	40.3	4.7	4.3	159.7	154.3	5.0	4.9	0.8	6.1	1.2	0.8	1.8	2.9
Frankenmuth	W	65.3	65.2	68.0	68.6	58.4	58.4	58.2	58.6	12.9	13.5	47.6	48.1	6.3	6.9	162.5	159.0	3.7	2.9	1.3	3.8	0.8	0.6	1.3	1.7
Pioneer Brand 25R37	R	83.6	82.3	---	---	60.3	60.8	---	---	13.1	13.3	38.1	37.7	2.2	1.6	159.9	154.6	4.1	2.8	1.8	4.3	0.0	0.0	0.1	0.3
Pioneer Brand 25R44	R	71.7	72.6	---	---	60.4	60.9	---	---	12.2	12.7	37.3	37.2	2.2	2.0	160.4	154.5	5.8	4.2	0.8	8.2	2.6	1.5	0.6	0.6
Pioneer Brand 25R49	R	72.0	72.3	---	---	59.2	60.1	---	---	11.9	11.9	37.3	37.1	3.3	2.8	159.0	153.5	6.0	4.3	1.0	7.8	3.1	1.9	1.5	1.2
Pioneer Brand 25R78	R	77.9	---	---	---	60.3	---	---	---	12.0	---	37.9	---	3.2	---	158.9	---	5.4	---	0.3	7.8	1.6	---	0.5	---
Pioneer Brand 25W60	W	81.9	81.6	85.5	---	59.6	60.0	59.5	---	11.8	11.9	41.3	40.3	5.3	4.0	159.7	154.8	5.3	4.1	0.8	7.1	1.9	1.1	2.2	1.4
RS 909	R	83.9	79.6	---	---	59.2	60.0	---	---	12.2	12.4	42.6	41.7	3.3	3.2	160.0	154.7	4.2	3.9	1.0	4.9	1.0	0.6	0.7	1.1
RS 931	R	83.8	---	---	---	58.6	---	---	---	11.5	---	38.3	---	6.1	---	160.0	---	2.6	---	1.0	1.1	0.0	---	2.1	---
Bernard	R	81.9	78.7	81.7	---	59.0	59.7	59.4	---	12.2	12.4	42.2	41.9	3.1	3.1	160.1	154.3	4.2	3.8	1.0	5.1	0.9	0.5	0.3	0.6
Bouillon	R	76.4	---	---	---	58.7	---	---	---	11.8	---	41.3	---	5.4	---	159.4	---	5.6	---	1.8	6.5	0.6	---	0.7	---
Coker 9025	R	71.3	---	---	---	57.4	---	---	---	13.0	---	38.9	---	7.1	---	159.7	---	5.9	---	0.3	6.9	0.4	---	0.1	---
Coker 9474	R	68.4	---	---	---	62.3	---	---	---	12.8	---	36.9	---	2.4	---	158.8	---	6.1	---	1.0	7.3	1.1	---	0.3	---
Coker 9663	R	73.8	---	---	---	59.8	---	---	---	12.8	---	42.7	---	7.7	---	159.8	---	3.5	---	0.5	5.7	0.7	---	1.4	---

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Table 1

Multi-year data are the most informative. MSU makes no endorsement of any variety or brand.

Name	Grain Color	Yield: Bushels/Acre				Test Weight: lbs/bu				Percent Grain Moisture at Harvest		Plant Height (Inches)		Lodging Score (0-9)		Flowering Date (Days Past Jan. 1)		Septoria Tritici (Leaf Blotch) Score (0-9)		BYD Score (0-9)	Powdery Mildew Score	Powdery Mildew Percent Infection on the Flag Leaf		Leaf Rust Percent Infection on the Flag Leaf	
			Multi-Year Averages				Multi-Year Averages				2-yr Avg		2-yr Avg		2-yr Avg		2-yr Avg		2-yr Avg				2-yr Avg		2-yr Avg
		2002	2 yr 01-02	3 yr 00-02	4 yr 99-02	2002	2 yr 01-02	3 yr 00-02	4 yr 99-02	2002	01-02	2002	01-02	2002	01-02	2002	01-02	2002	01-02	2002	2002	2002	01-02	2002	01-02
Coker BL940812	R	76.3	---	---	---	61.0	---	---	---	13.5	---	36.6	---	2.5	---	159.6	---	3.6	---	1.0	5.2	0.6	---	0.3	---
VA97W-375WS	W	80.1	---	---	---	60.0	---	---	---	11.9	---	36.1	---	5.2	---	159.5	---	2.6	---	1.0	0.8	0.0	---	0.2	---
McCormick	R	81.6	---	---	---	62.5	---	---	---	13.5	---	35.8	---	2.9	---	159.1	---	3.0	---	1.0	0.5	0.2	---	0.3	---
Tribute	R	85.4	---	---	---	62.2	---	---	---	14.2	---	37.7	---	4.7	---	157.8	---	2.2	---	1.0	0.3	0.0	---	0.4	---
VA97W-469	R	72.5	---	---	---	59.6	---	---	---	12.0	---	40.3	---	4.3	---	159.7	---	4.2	---	1.5	1.1	0.3	---	0.2	---
Average		**77.5**	**76.7**	**79.7**	**79.3**	**59.3**	**59.3**	**58.8**	**58.9**	**12.4**	**12.5**	**40.4**	**40.5**	**4.4**	**4.1**	**159.9**	**154.7**	**4.5**	**3.8**	**1.3**	**4.7**	**1.0**	**0.6**	**1.3**	**1.5**
LSD		**5.1**	**6.1**	**4.4**	**3.2**	**0.9**	**2.0**	**1.4**	**1.2**	**0.6**	**1.4**	**1.6**	**1.7**	**2.1**	**1.5**	**1.1**	**1.8**	**1.5**	**1.9**	**1.0**	**1.3**	**1.3**	**1.2**	**1.8**	**2.2**
CV		**5.8**	**3.9**	**3.4**	**2.8**	**1.4**	**1.6**	**1.5**	**1.4**	**4.3**	**5.5**	**2.0**	**2.1**	**23.8**	**18.1**	**0.3**	**0.6**	**24.2**	**24.4**	**58.3**	**20.7**	**59.6**	**---**	**63.1**	**---**

LSD =Least significant difference, i.e., differences smaller than the LSD are probably due to chance. CV - Low values mean higher precision.

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Table 2

Multi-year data are the most informative. MSU makes no endorsement of any variety or brand.

		Fusarium Head Blight (Scab)				Milling and Baking Properties (2001 Crop)					In-Head Pre-Harvest Sprout Score (0-9)			
		Severity : Percent of Spikelets Infected		Incedence : Percent of Heads Infected										
	Grain		2-yr avg		2-yr avg	Percent Flour	Percent Protien	Alkaline Water	Lactic Acid	Softness		2 -yr avg	3-yr avg	
Name	Color	2002	01-02	2002	01-02	Yield	in Flour	Retention	Retention	Equivalent	2002	01-02	99-02	**Submitted by:**
Mitchell	R	30.0	23.5	0.7	20.2	72.8	8.2	59.6	84.0	60.4	4.0	3.4	---	Agripo Wheat
Patton	R	16.7	13.5	0.0	23.3	71.2	8.4	59.5	82.6	54.5	4.2	4.1	4.3	Agripo Wheat
CM 21035	R	54.7	---	0.8	---	---	---		---	---	7.5	---	---	C & M Seeds
Genesis 9953	R	29.0	26.3	0.7	20.4	68.9	7.9	61.9	99.5	54.7	6.7	5.0	4.8	Genesis Brand Seed
Genesis R022 Exp	R	50.1	---	2.1	---	---	---	---	---	---	5.5	---	---	Genesis Brand Seed
Genesis R026 Exp	R	23.0	---	0.7	---	---	---	---	---	---	7.8	---	---	Genesis Brand Seed
Genesis R036 Exp	R	40.0	---	0.6	---	---	---	---	---	---	5.5	---	---	Genesis Brand Seed
Genesis R037 Exp	R	20.0	---	0.3	---	---	---	---	---	---	4.7	---	---	Genesis Brand Seed
Richland	W	39.3	---	3.1	---	---	---	---	---	---	8.5	---	---	Genesis Brand Seed
W026	W	20.3	---	0.9	---	---	---	---	---	---	7.3	---	---	Genesis Brand Seed
W036	W	29.7	---	1.5	---	---	---	---	---	---	7.0	---	---	Genesis Brand Seed
Superior	W	32.8	22.6	1.2	12.4	72.7	8.0	55.7	87.6	54.8	9.0	7.0	6.8	Harrington Seeds, Inc.
Caledonia	W	48.9	43.3	1.6	28.6	72.8	7.8	56.0	97.3	54.6	8.7	6.7	6.4	Harrington Seeds, Inc. & Genesis Brand Seed
Navigator	R	15.6	14.4	1.4	38.9	70.6	7.7	59.3	119.9	59.5	6.0	4.1	3.6	Irrer Seed Farm
AC Mountain	W	43.9	30.1	0.9	14.7	73.6	7.6	54.8	92.7	57.3	8.8	7.4	6.8	Michigan Crop Improvement Association
AC Ron	W	41.4	27.5	1.6	16.0	70.7	7.6	55.3	93.1	55.1	8.5	7.2	6.5	Michigan Crop Improvement Association
Autumn	R	17.2	16.1	1.6	31.5	73.5	7.8	57.2	70.8	52.1	8.0	5.6	---	Michigan Crop Improvement Association
Bravo	R	14.5	14.7	0.0	25.6	71.3	8.5	57.0	87.7	53.5	3.0	2.4	3.0	Michigan Crop Improvement Association
Cedar	R	19.7	14.1	1.3	22.1	69.3	6.8	61.1	109.4	53.2	4.0	2.8	---	Michigan Crop Improvement Association
Hopewell	R	20.0	24.0	1.7	40.5	70.7	8.0	59.0	101.4	58.1	1.8	1.3	1.1	Michigan Crop Improvement Association
Harus	W	38.8	26.9	2.1	22.8	71.8	7.9	56.1	85.1	56.2	8.7	7.0	5.9	Michigan Crop Improvement Association
INW0101	R	27.2	---	0.8	---	---	---	---	---	---	3.5	---	---	Michigan Crop Improvement Association
Lowell	W	71.7	50.2	2.6	25.7	73.2	7.8	57.3	97.1	59.1	8.7	6.8	6.5	Michigan Crop Improvement Association
Pearl	W	50.6	42.9	0.9	26.1	72.5	8.3	57.6	104.3	55.6	6.0	5.6	5.4	Michigan Crop Improvement Association
OAC Ariss	W	20.7	13.4	0.9	15.0	72.2	8.3	56.3	89.6	55.7	7.0	5.6	5.0	Michigan Crop Improvement Association
Roane	R	21.1	15.1	0.7	28.6	70.1	8.0	61.2	106.9	55.5	2.0	2.7	2.3	Michigan Crop Improvement Association
Sisson	R	29.0	20.9	2.1	36.1	71.2	7.7	58.2	85.2	52.5	4.7	3.5	3.2	Michigan Crop Improvement Association
MSU Line D6234	W	29.6	25.8	1.6	29.6	70.7	7.6	59.6	81.4	52.3	7.3	5.7	5.1	Michigan State University
MSU Line D8006	W	32.0	27.7	1.5	39.6	74.0	8.1	56.8	106.5	57.3	6.0	4.5	---	Michigan State University
Frankenmuth	W	17.6	14.4	1.1	7.4	71.0	8.3	57.3	87.5	50.4	8.8	6.7	5.9	Michigan State University - Long Term Check
Pioneer Brand 25R37	R	15.7	12.6	1.8	32.8	70.2	8.3	61.0	103.3	53.6	6.0	4.1	---	Pioneer - A Dupont Company
Pioneer Brand 25R44	R	19.2	18.6	0.9	43.8	71.2	7.8	62.0	123.1	56.2	6.3	4.8	---	Pioneer - A Dupont Company
Pioneer Brand 25R49	R	39.5	29.3	1.2	32.4	71.6	7.9	58.0	86.8	53.2	1.0	1.2	---	Pioneer - A Dupont Company
Pioneer Brand 25R78	R	28.4	---	1.0	---	---	---	---	---	---	1.8	---	---	Pioneer - A Dupont Company
Pioneer Brand 25W60	W	19.7	19.6	1.3	44.1	72.8	7.6	57.2	85.7	53.8	4.2	4.0	3.5	Pioneer - A Dupont Company
RS 909	R	27.6	26.7	0.3	31.6	72.9	8.2	58.0	100.9	54.3	8.0	6.4	---	Rupp Seeds, Inc.
RS 931	R	21.5	---	0.9	---	---	---		---	---	7.2	---	---	Rupp Seeds, Inc.
Bernard	R	32.9	30.1	0.9	32.5	73.0	7.9	56.9	101.2	55.0	7.2	5.8	5.3	Steyer Seeds, Inc.
Bouillon	R	26.4	---	0.6	---	---	---	---	---	---	5.5	---	---	Steyer Seeds, Inc.
Coker 9025	R	35.1	---	1.2	---	---	---	---	---	---	3.2	---	---	Syngenta Seeds, Inc.
Coker 9474	R	12.3	---	0.5	---	---	---	---	---	---	5.5	---	---	Syngenta Seeds, Inc.
Coker 9663	R	31.3	---	0.7	---	---	---	---	---	---	5.0	---	---	Syngenta Seeds, Inc.

Michigan State Wheat Variety Trial: 2002

Table 2

Multi-year data are the most informative. MSU makes no endorsement of any variety or brand.

Name	Grain Color	Fusarium Head Blight (Scab) Severity : Percent of Spikelets Infected 2002	Severity : Percent of Spikelets Infected 2-yr avg 01-02	Incedence : Percent of Heads Infected 2002	Incedence : Percent of Heads Infected 2-yr avg 01-02	Milling and Baking Properties (2001 Crop) Percent Flour Yield	Percent Protien in Flour	Alkaline Water Retention	Lactic Acid Retention	Softness Equivalent	In-Head Pre-Harvest Sprout Score (0-9) 2002	2 -yr avg 01-02	3-yr avg 99-02	Submitted by:
Coker BL940812	R	38.4	---	2.0	---	---	---	---	---	---	5.5	---	---	Syngenta Seeds, Inc.
VA97W-375WS	W	35.3	---	1.1	---	---	---	---	---	---	7.0	---	---	Virginia Polytechnic Institute & State University / VCI
McCormick	R	14.9	---	0.7	---	---	---	---	---	---	2.5	---	---	Virginia Polytechnic Institute & State University / VCI
Tribute	R	33.2	---	0.7	---	---	---	---	---	---	5.0	---	---	Royster-Clark
VA97W-469	R	22.8	---	2.1	---	---	---	---	---	---	8.0	---	---	Genesis Brand Seed
Average		**29.4**	**23.2**	**1.3**	**33.9**	**---**	**---**	**---**	**---**	**---**	**5.7**	**4.7**	**4.6**	
LSD		**21.0**	**15.4**	**1.3**	**NS**	**---**	**---**	**---**	**---**	**---**	**1.9**	**2.3**	**1.6**	
CV		**41.2**	**32.8**	**61.0**	**NS**	**---**	**---**	**---**	**---**	**---**	**23.1**	**24.1**	**21.6**	

LSD =Least significant difference, i.e., differences smaller than the LSD are probably due to chance. CV - Low values mean higher precision. NS = Not Significantly Different

MSU Wheat Performance Trial Results: 2002 — Yield Data Only (bu/acre)

Multi-year data are the most informative. MSU makes no endorsement of any variety or brand.

Table 3

Caution: multi-year data are more informative than single year averages. Single site/single year data should not be used to make variety choice decisions.

Name	Location (county)						Average all sites
	Lenawee	Ingham	Saginaw	Midland	Sanilac	Huron	
Mitchell	80.0	75.2	70.2	78.1	69.0	56.5	71.5
Patton	82.5	80.1	83.5	84.7	76.9	65.5	78.9
CM 21035	83.3	90.5	85.9	90.4	84.9	68.5	83.9
Genesis 9953	83.5	75.8	78.6	85.3	70.0	63.9	76.2
Genesis R022 Exp	80.7	75.2	81.9	89.7	78.8	60.5	77.8
Genesis R026 Exp	77.8	73.8	75.9	86.4	63.9	59.9	73.0
Genesis R036 Exp	88.9	86.6	77.0	72.9	56.1	68.3	75.0
Genesis R037 Exp	83.6	79.2	82.9	89.4	63.8	62.3	76.9
Richland	84.2	86.9	79.3	84.5	80.0	58.5	78.9
W026	81.0	78.1	69.2	76.2	62.6	62.0	71.5
W036	83.5	83.0	78.5	85.7	65.9	65.9	77.1
Superior	76.9	72.4	74.5	86.9	72.8	58.8	73.7
Caledonia	89.5	82.4	84.7	92.8	81.5	64.3	82.5
Navigator	83.6	76.3	84.2	89.8	66.7	66.5	77.9
AC Mountain	86.3	76.7	81.9	89.2	74.7	70.7	79.9
AC Ron	87.3	77.8	77.0	85.7	66.1	63.5	76.2
Autumn	90.7	82.8	84.2	94.5	83.2	70.5	84.3
Bravo	88.5	89.3	93.4	97.6	80.8	66.8	86.1
Cedar	91.5	84.7	81.0	92.6	84.2	77.0	85.2
Hopewell	87.6	92.5	82.9	94.2	85.8	67.1	85.0
Harus	83.6	78.6	80.7	85.2	78.0	64.4	78.4
INW0101	89.8	87.6	81.3	89.6	90.8	65.2	84.1
Lowell	84.3	76.5	74.3	78.9	55.8	66.3	72.7
Pearl	85.7	86.1	80.7	94.3	78.1	66.8	82.0
OAC Ariss	85.3	76.5	77.8	84.9	73.6	60.5	76.4
Roane	89.0	84.5	83.8	92.3	79.5	71.5	83.4
Sisson	87.6	86.4	79.7	88.0	71.6	70.8	80.7
MSU Line D6234	92.6	90.9	80.7	84.0	67.5	61.3	79.5
MSU Line D8006	91.9	86.7	80.9	89.3	56.3	72.8	79.7
Frankenmuth	73.8	68.7	71.5	73.7	50.4	53.8	65.3
Pioneer Brand 25R37	87.9	87.7	84.0	93.3	83.0	65.6	83.6
Pioneer Brand 25R44	75.7	69.0	73.7	82.2	62.7	66.9	71.7
Pioneer Brand 25R49	78.5	71.0	76.0	81.8	56.0	68.4	72.0
Pioneer Brand 25R78	84.6	79.3	81.9	86.8	68.4	66.4	77.9
Pioneer Brand 25W60	84.0	83.5	87.1	84.3	76.0	76.4	81.9

MSU Wheat Performance Trial Results: 2002 — Yield Data Only (bu/acre)

Multi-year data are the most informative. MSU makes no endorsement of any variety or brand.

Table 3

Name	Location (county)						Average all sites
	Lenawee	Ingham	Saginaw	Midland	Sanilac	Huron	
RS 909	92.0	87.0	84.9	93.4	79.7	66.3	83.9
RS 931	88.2	84.4	87.2	89.3	84.2	69.6	83.8
Bernard	88.3	83.4	86.2	88.6	79.2	65.4	81.9
Bouillon	84.7	76.2	79.9	83.6	71.0	63.1	76.4
Coker 9025	74.1	81.1	68.6	75.8	56.2	72.0	71.3
Coker 9474	72.8	67.3	71.2	77.1	64.2	57.5	68.4
Coker 9663	79.0	73.3	75.7	83.9	72.6	58.4	73.8
Coker BL940812	79.7	82.5	78.5	82.8	72.0	62.3	76.3
VA97W-375WS	84.6	85.7	81.2	85.9	74.0	68.9	80.1
McCormick	84.3	87.0	79.9	91.3	84.3	62.7	81.6
Tribute	87.7	86.2	85.5	92.1	87.3	73.8	85.4
VA97W-469	80.4	80.3	73.8	79.0	60.1	61.6	72.5
average	83.4	80.2	79.3	85.3	72.2	64.9	77.5
lsd	4.1	5.6	6.9	8.2	9.0	5.4	5.1
cv	3.4	4.8	5.8	6.8	8.7	5.4	5.8

Caution: multi-year data are more informative than single year averages. Single site/single year data should not be used to make variety choice decisions.

Appendix A. Trial Site Descriptions for 2002 MSU Wheat Variety Trials.

	Ingham County	Huron County	Ionia County	Lenawee County	Midland County	Sanilac County	Saginaw County
Cooperator	Oesterle Brothers	Wayne Sturm	Michigan State University	Woods Seed Farm	Fred Siler	Stoughtenburg Farms	Stuart Bierlein
Nearest City	Mason	Pigeon	Clarksville	Britton	Merrill	Sandusky	Gera
Date planted	10/09/01	10/08/01	11/05/01	10/10/01	10/09/01	10/04/01	10/08/01
Date harvested	07/14/02	07/17/02	07/12/02	07/13/02	07/17/02	07/20/02	07/16/02
Pre-Plant Fertilizer	350# 6-24-24	None	150# 46-0-0	200# 9-22-29+ 1%Mn+0.5%S	200# 10-13-36+ 1%Mn	None	300# 5-16-33+ 0.2Mg+0.5 MN +0.4Cu
Comments	Sprayed for Armyworms		Irrigated, Inoculated Scab Nursery		Sprayed for Armyworms	Sprayed for Armyworms	
Avg. yield (bu/acre)	80.2	64.9	N / A	83.4	85.3	72.2	79.3
Avg. test weight (lbs/bu)	58.5	58.9	N / A	59.9	60.2	59.1	58.9
Avg. grain moisture (%)	12.7	11.9	N / A	11.1	13.4	12.6	12.4
Other data (# of reps)*	BYD (2), PM (2), Sept. (2)		FD (3), Scab Sev. (3), Scab Inc. (3)	BYD (2), LR%F (2), PM (2), PM%F (2), Sept.(2)	FD(4), Lod (4), PlHt (4)	BYD (2), PM (2), Sept. (2)	BYD (2), Lod (4), PlHt (4), PM (2), Sept.(2), SPROUT (4)

*** BYD** – Barley Yellow Dwarf Score, **FD** – Flowering Date, **Lod** – Lodging Score, **LR%F** - Percentage of Flag Leaf Covered with Leaf Rust, **PltHt** - Plant Height in Inches, **PM** – Powdery Mildew Score, **PM%F** – Percentage of Flag Leaf Covered with Powdery Mildew, **Scab Inc.** – Fusarium Head Blight Incidence, **Scab Sev.** - Fusarium Head Blight Severity, **SPROUT** – In-Head Pre-Harvest Sprouting Score, **Sept.** – Septoria Score

ORGANIZATIONS ENTERING VARIETIES TO THE 2002 MICHIGAN WHEAT VARIETY TRIALS

Agripo Wheat
P.O. Box 411, 520 E. 1050 South
Brookston, IN 47923

C & M Seeds
6180 5th Line Minto
Palmerston, ON NOG 2PO
CANADA

Genesis Brand Seed
P.O. Box 21085
Lansing, MI 48909

Harrington Seeds, Inc.
2586 Bradleyville Road
Reese, MI 48757

Irrer Seed Farm
9621 Dexter Trail
Fowler, MI 48835

Michigan Crop Improvement Association
21008 Jolly Road
Lansing, MI 48909

Pioneer Hi-Bred International
210 Westfield Drive
Archbold, OH 43502

Royster-Clark
700 N. Market Street
Mt. Sterling, OH 43143

Rupp Seeds, Inc.
17919 Co Rd. B
Wauseon, OH 43567

Steyer Seeds, Inc.
6154 North County Road 33
Tiffin, OH 44883

Syngenta Seeds, Inc.
P.O. Box 1240
Winterville, N.C. 28590

Virginia Polytechnic Institute & State University
CSES Dept.
Blacksburg, VA 24061