



*Progress Report 273*

**1983**  
**Kentucky**  
**Small Grain**  
**Variety Trials**

UNIVERSITY OF KENTUCKY  
COLLEGE OF AGRICULTURE  
Agricultural Experiment Station  
Department of Agronomy

# Contents

	<i>Page</i>
Introduction .....	3
Experimental Methods .....	4
Data Collected .....	4
Results and Discussion .....	5
1983 Test Conditions .....	5
1982 Test Conditions .....	5
1981 Test Conditions .....	6
Small Grain Varieties for 1984 .....	6
Soft Red Winter Wheat Varieties .....	6
Winter Barley Varieties .....	6
Certified Seed .....	6

## **TABLES**

1. Small Grain Harvested Acreage and Yields in Kentucky, 1981-1983 .....	3
2. Region, Locations, Preceding Crop and Planting Dates of Kentucky Small Grain Trials, 1981-1983 .....	4
3. Characteristics of Wheat Varieties Tested in 1983 .....	8
4. Wheat Performance Trials for Purchase Region, 1981-1983 .....	10
5. Wheat Performance Trials for Western Coal Field Region, 1981-1983 .....	11
6. Wheat Performance Trials for Ohio Valley Region, 1981-1983 .....	12
7. Wheat Performance Trials for Bluegrass Region, 1981-1983 .....	13
8. Wheat Performance Trials for Southern Tier Region, 1981-1983 .....	14
8A. Wheat Performance Trials for Southern Tier Region, 1981-1983 .....	15
9. Wheat Performance Trials for North Central Region, 1980, 1982-1983 .....	16
10. Disease Ratings of Wheat Varieties at Several Locations, 1983 .....	17
11. Characteristics of Barley Varieties Tested in 1983 .....	18
12. Barley Performance Trials for Western Coal Field Region, 1981-1983 .....	19
13. Barley Performance Trials for Bluegrass Region, 1981-1983 .....	19
14. Barley Performance Trials for Southern Tier Region, 1981-1983 .....	20
14A. Barley Performance Trials for Southern Tier Region, 1981-1983 .....	20

# 1983 Kentucky Small Grain Variety Trials

D. A. Van Sanford, C. R. Tutt,  
K. M. Tichenor, and W. H. Roberts

In 1983, Kentucky farmers harvested 20.3 million bushels of soft red winter wheat produced on 580,000 acres. The average yield of 35 bu/a was down considerably from the record 42 bu/a set in 1981. Barley acreage and average yield dropped from 1982 levels.

**Table 1.—Small Grain Harvested Acreage and Yields in Kentucky, 1981-1983.\***

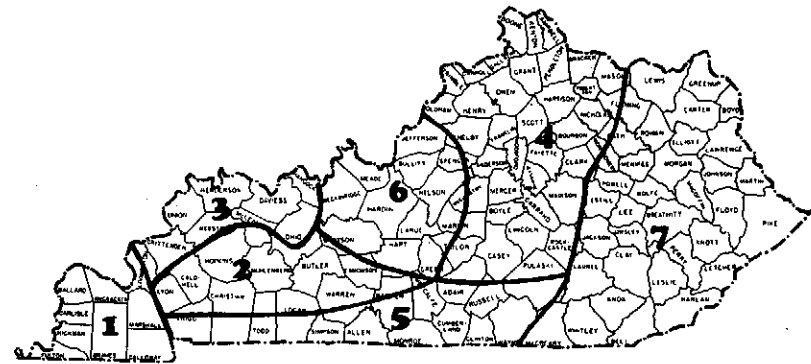
Crop	1983		1982		1981	
	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A
Wheat	580	35	675	39	700	42
Barley	25	38	32	48	32	52
Oats	6	42	7	43	7	39
Rye	3	29	2	27	4	25

\*August 1, 1983, Kentucky Crop and Livestock Reporting Service

Small grain performance tests were conducted in six of the seven agroclimatic regions of Kentucky (Fig. 1). Agricultural areas within each region are considered to have similar soil types and climatic conditions. Each region having a substantial acreage of a small grain commodity will have a trial conducted in that region for that commodity.

Acknowledgement is made to the following individuals for their contributions to the bulletin: Larry Reber, Tom Curtsinger, Rodney Haines, Tommy Harrison and Russell Lowe, County Extension Agents for Agriculture, for assistance in locating test sites and collecting data; R. E. Stuckey and W. Wilcox for disease ratings; J. Byars for data analysis; J. Carey for text and table preparation.

The objective of the Kentucky small grain variety trials is to evaluate varieties of barley and wheat that are commercially available or may soon be available to Kentucky farmers. New varieties are continually being developed by agricultural experiment stations



**Figure 1.—Agro-climatic regions of Kentucky small grain variety trials.**

Region	1983 Location	Cooperator	Crop Tested
1 Purchase	Hickman	Joe & Joe F. Campbell	Wheat
2 Western Coal Field	Princeton (Sandstone soil)	Research & Education Center—Princeton	Barley, Wheat
3 Ohio Valley	Owensboro	Bobby & Eddy Richards	Wheat
4 Bluegrass	Lexington	Kentucky Agricultural Experiment Station	Barley, Wheat
5 Southern Tier	Russellville Princeton (Limestone soil)	Jeff Campbell Research & Education Center—Princeton	Barley, Wheat Barley, Wheat
6 North Central	Greensburg	William Henderson	Wheat

and commercial firms. Annual evaluation of small grain varieties and selections provides seedsmen, farmers, and other agricultural workers with current information to help them select the varieties best adapted to their locality and individual requirements.

Since weather, soil and other environmental factors will alter varietal performance from one location to another, tests are grown in six locations (Fig. 1) in the state. Suggested varieties are revised each year because of the availability of new varieties, improvements in production practices, and continually changing disease and insect hazards.

## EXPERIMENTAL METHODS

The plots were planted with a specially built multi-row cone seeder. Each plot consisted of six rows to form a plot 4 feet wide, which was later trimmed to 10 feet in length. Each variety was grown in four replications, and the data presented are the average response from the four replications of 40 square feet harvested with a small plot combine. Planting dates of all trials for the past 3 years are listed in Table 2.

In some instances, uncontrollable factors—such as excessive rainfall, winter killing, high winds, hail, grazing cattle, etc.—adversely affected an experiment so that the results were judged unreliable. When this occurred, results are not given for that location and year. Data averaged over a period of years gives a more accurate picture of varietal performance than does annual data.

## DATA COLLECTED

It is important to consider other characteristics in addition to grain yield when selecting a variety.

**Grain yield** of plots was taken by cutting all rows with a self-propelled combine. The weights of each plot were recorded in grams and converted to bushels per acre.

**Test weight**, or the weight of a bushel of grain, is a measure of the quality of the grain. The higher the test weight, the higher the quality and market value, unless the grain has been down-graded because of another quality factor.

**Table 2.—Region, Location, Preceding Crop and Planting Dates of Kentucky Small Grain Trials, 1981-83.**

Region	Location	Preceding Crop	Crop	Planting Date		
				1983	1982	1981
Purchase	Mayfield (1981-82) Hickman (1983)	Soybeans Corn	Wheat	10/18	10/30	10/22
Western Coal Field	Princeton (Sandstone soil)	Fallow	Barley Wheat	10/13 10/13	10/14 10/14	10/06 10/06
Ohio Valley	Henderson (1981) Owensboro (1982) (1983)	Soybeans Corn Soybeans	Wheat	10/25	10/29	10/13
Bluegrass	Lexington	Fallow	Barley Wheat	9/29 10/15	10/15 10/22	10/07 10/09
Southern Tier	Hopkinsville (1981-82)	Corn	Barley	10/15	10/15	10/10
	Russellville (1983)	Corn	Wheat	10/15	10/15	10/10
	Princeton (Limestone soil)	Fallow	Barley Wheat	10/14 10/14	10/06 11/02	10/07 10/16
North Central	Greensburg (1982-83)	Soybeans	Wheat	11/01	10/21	—

**Lodging** was recorded as the percentage of the total plants lying on the ground or leaning at a 45-degree angle from the vertical when the grain was mature. The term "maturity" as used in this report refers to the date the grain was ready to be combine harvested.

**Plant height** was recorded as the number of centimeters from the ground to the tip of the upright grain head, and converted to inches.

**Survival** was recorded as the percentage of plants estimated to have survived the winter. This is a measure of winterhardness and is an important factor to consider when selecting a variety.

**Heading date** is reported as the date when 50% of the heads had emerged from the plants in each plot. This is also a measure of maturity and is important when selecting a variety for use in a double-cropping system.

Disease and insect data are reported as relative amounts that occurred on the varieties at the time the readings were made. Disease and insect problems are often different in different years.

## RESULTS AND DISCUSSION

Since genetic expression of a variety is greatly influenced by environmental conditions, it is best to have several years' data from which to draw conclusions. Performance of a variety tested for only one year should not be compared with a 3-year average of another variety, since it is possible that results in one of the other years were extremely good or poor, and thus not comparable.

The yield of a variety is relative and should be compared with the yields of the other varieties in the same experiment and at the same location. Small differences in yield of only a few bushels per acre between two varieties from an individual test should not be interpreted to indicate the superiority of one variety over another. However, if one variety consistently out-yields another over a period of several years, the chances are that the differences are real.

Lodging data are very difficult to interpret. A high-yielding variety should not necessarily be down-graded because of a high percentage of lodging for a given year and at a given location. Local weather conditions, such as wind and rain, may cause a variety to lodge much more than it normally does. Variety trials normally have a greater degree of lodging than do farmer fields. It should also be emphasized that a variety reported to be 50% lodged does not imply that only 50% of the grain could be harvested. With good equipment, almost all of the grain can often be saved. Lodging data for a period of years should receive more consideration than annual lodging data since they will give a more accurate picture of varietal performance.

### 1983 TEST CONDITIONS

Mild fall weather permitted planting of the 1982 crop to be completed on schedule.

Unusually warm temperatures prevailed through the fall and early winter. Lush growth of small grains was observed during this period and winterkill was essentially nonexistent. These mild condi-

tions allowed for a heavy infestation of aphids, which can transmit barley yellow dwarf virus. Fungal pathogens which do not normally overwinter in Kentucky were able to survive the winter of 1982-83.

The mild winter was followed by a late cool spring with excessive precipitation. This combination of winter and spring conditions created an environment ideal for diseases of small grains.

Barley yellow dwarf virus was severe in the central and southern tier regions of the state. The severity of the disease is reflected in the low average yield of barley across the state (38 bu/a).

Wheat was affected by the yellow dwarf virus, but also had to contend with wheat spindle streak mosaic virus, powdery mildew, leaf blotch, leaf rust, glume blotch, and head scab. The highest levels of head scab observed in years were seen in 1983.

Diseases and their severity varied across test locations. Ratings of a number of these diseases at several locations are found in Table 10.

### 1982 TEST CONDITIONS

Seeding of the 1982 crop was completed on schedule at most locations. Mild fall conditions with adequate moisture allowed for good stand establishment and plant development in all tests.

Record low temperatures were observed across the state in January. In the absence of adequate snow cover, more winterkill than normal occurred. Winter oats were very severely damaged across the state, while winterkill of barley and wheat was considerably less.

A hard freeze occurred in April after wheat had begun to joint and barley was approaching the boot stage in the southern part of the state. While some injury to spikes resulted from this late freeze, damage was much less extensive than expected.

The cool, late spring provided favorable conditions for disease development. There were severe infestations of powdery mildew and leaf rust which began in the Purchase Area and the Southern Tier and moved north and east. As a result of this heavy disease pressure, yields and test weights of wheat were lower than those in 1981.

In addition, the disease conditions contributed to the variability in varietal performance across locations.

## 1981 TEST CONDITIONS

Favorable weather prevailed during the fall of 1980 and seeding of the 1981 crop was completed by a near normal date. The winter was unusually mild, and consequently little winterkill was observed. Early warming in the spring hastened the maturity of the small grain crops, and heading dates considerably earlier than usual were recorded. Little spring freeze damage occurred, however. Above average precipitation in June, followed by periods of strong winds, resulted in severe lodging in certain areas of the state. The harvest dates of the 1981 crop were earlier than usual, and the harvest was completed without undue delay.

Heavy infestation of the head scab fungus and *Septoria glume blotch* were responsible for lower test weights and overall reduction in seed quality. Powdery mildew was in evidence, as were tan spot and loose smut. Little yield loss was attributed to these diseases.

## SMALL GRAIN VARIETIES FOR 1984

Varieties eligible for certification include (1) varieties that may have potential for Kentucky and (2) older varieties that are still acceptable for production in Kentucky. The characteristics of the small grain varieties are summarized in Tables 3 and 11.

### Soft Red Winter Wheat Varieties

Kentucky's climate and soils are well suited for the production of high quality soft red winter wheat. No single variety has all the desirable characteristics, but each has certain advantages. Yielding ability, straw strength, height, earliness, grain quality, and disease resistance are important in choosing a variety. Varietal performance is presented in Tables 4-9.

Arthur and Abe were the most widely grown varieties for many years. With the development of higher yielding varieties adapted to Kentucky, that picture is changing. Tyler and Wheeler are two varieties developed in Virginia which have performed well for several years in the statewide tests.

### Winter Barley Varieties

Winter barleys are less winterhardy than winter wheat but more hardy than winter oats. The degree of winterhardiness, straw strength, and maturity are important characteristics when choosing a variety. Varietal performance data are presented in Tables 12-14A. Varieties now commonly grown are Barsoy and Volbar.

## CERTIFIED SEED

Planting certified seed is one of the first steps in ensuring a good small grain crop. The extra cost of certified seed is justified in view of the high quality of seed obtained. Certified seed is seed which has been grown in such a way as to ensure the genetic identity and purity of a variety. Certified seed also helps to maintain freedom from weed and other crop seed and, in some cases, freedom from disease. The Kentucky Agricultural Experiment Station recommends that Kentucky-certified seed be used whenever possible for growing commercial crops of small grains.

# TABLES

**Table 3.—Characteristics of Wheat Varieties Tested in 1983.**

Variety	Protected <sup>3/</sup>	Source	Release Date	Average of 1983 Tests Over 7 Locations					
				Bu/A	Lb/Bu	Heading Date	Height (In)	Lodged (%)	Survival (%)
Tyler	No	Virginia	1980	49	52.5	5/16	39	20	100
Fillmore	Yes	Indiana	1982	48	56.2	5/22	41	17	100
VA 79-54-254	No	Virginia	1982	47	54.2	5/15	33	21	100
Pioneer 2553	Yes	Pioneer Hi-Bred International	1982	47	54.7	5/15	36	4	100
Massey	No	Virginia	1981	46	53.8	5/12	37	28	100
Auburn	Yes	Indiana	1980	46	55.1	5/20	37	15	100
Feland	Yes	Southern States	1982	46	55.0	5/16	37	19	100
Wheeler	No	Virginia	1980	44	55.5	5/16	37	16	100
HW 3007	---	Rohm & Haas	----	43	52.1	5/16	38	18	100
Sullivan	Yes	Indiana	1977	43	56.1	5/14	37	10	100
Caldwell	Yes	Indiana	1980	43	53.1	5/16	35	13	100
Pioneer 2550	Yes	Pioneer Hi-Bred International	1982	43	51.9	5/16	35	14	100
Pioneer S76	Yes	Pioneer Hi-Bred International	1976	43	54.8	5/17	37	4	100
JS 222	Yes	J. M. Schultz Seed Company	1981	41	54.7	5/16	37	15	100
Coker 747	Yes	Coker's Pedigreed Seeds	1977	41	54.4	5/16	33	23	100
Hunter	Yes	North American Plant Breeders	1982	40	55.6	5/10	29	19	100
Roy	Yes	North Carolina	1979	40	50.2	5/15	37	11	100
Coker 916	Yes	Coker's Pedigreed Seeds	1982	40	52.4	5/11	32	25	100
Hart	No	Missouri	1976	40	53.1	5/15	37	5	100
Rosen	No	Arkansas	1979	40	51.5	5/12	33	13	100



**Table 3.—Continued.**

Variety	Protected <sup>3/</sup>	Source	Release Date	Average of 1983 Tests Over 7 Locations					
				Bu/A	Lb/Bu	Heading Date	Height (In)	Lodged (%)	Survival (%)
Pike	Yes	Missouri	1980	39	52.9	5/17	35	21	100
HW 3006	---	Rohm & Haas	----	38	52.5	5/14	38	19	100
Scotty	No	Illinois	1982	37	53.1	5/16	36	21	100
Beau	Yes	Indiana	1976	36	54.9	5/16	34	2	100
Doublecrop	No	Arkansas	1975	36	56.0	5/10	35	19	100
McNair 1003	Yes	Northrup King Seeds	1977	35	49.8	5/12	33	25	100
Severn	Yes	Maryland	1982	34	51.9	5/12	36	26	100
Arthur	No	Indiana	1968	34	54.1	5/15	36	8	100
Arthur 71	Yes	Indiana	1971	34	55.1	5/16	36	15	100
Abe	Yes	Indiana	1972	34	54.2	5/15	33	12	100
Southern Belle	Yes	North American Plant Breeders	1980	32	53.4	5/11	29	19	100

CV = 14%<sup>1/</sup>

LSD<sub>(.05)</sub> = 4.0 Bu/A<sup>2/</sup>

<sup>1/</sup> The CV is a measure of experimental error. The lower the CV, the more reliable the results.

<sup>2/</sup> The LSD (Least Significant Difference) is the minimum difference in yields required for two varieties to be significantly different from one another.

<sup>3/</sup> "Unauthorized propagation prohibited." Seed of these varieties must be sold by variety name only as a class of certified seed. This includes varieties for which protection has been applied and those for which protection has been granted.

**Table 4.—Wheat Performance Trials for Purchase Region, 1981-1983.**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
Fillmore	56	28		42	58.1	59.2		58.6	0	0		0	41	34		37	100	100		100	5/18	5/14		5/16
Tyler	54	57	63	58	55.5	58.8	57.5	57.3	15	0	38	18	41	35	37	38	100	100	100	100	5/13	5/01	4/29	5/04
Pioneer 2553	54			54	56.1			56.1	0			0	37			37	100			100	5/12			5/12
Caldwell	53	47	59	53	55.4	57.7	57.6	56.9	0	0	24	8	37	33	36	35	100	100	100	100	5/12	5/06	4/28	5/05
HW 3006	52	55		54	56.1	60.9		58.5	1	0		1	43	35		39	100	100		100	5/10	5/05		5/08
Massey	52	68		60	55.6	60.2		57.9	3	0		1	39	36		38	100	100		100	5/08	5/04		5/06
VA 79-54-254	49	54		52	52.8	61.0		56.9	0	0		0	32	31		31	100	100		100	5/13	5/06		5/09
Auburn	49	31	38	39	56.9	60.6	55.2	57.6	0	0	0	0	37	33	40	37	100	100	100	100	5/18	5/11	5/07	5/11
HW 3007	48			48	54.3			54.3	0			0	41			41	100			100	5/13			5/13
Wheeler	48	51	64	54	57.4	59.7	58.7	58.6	0	0	19	6	40	38	39	39	100	100	100	100	5/13	5/06	4/27	5/05
Pike	48	49	56	51	55.9	59.4	56.8	57.4	3	0	0	1	38	34	36	36	100	100	100	100	5/13	5/07	4/28	5/05
Sullivan	47	40	53	46	57.3	60.0	59.4	58.9	0	0	14	5	39	34	37	37	100	100	100	100	5/11	5/04	4/25	5/03
Pioneer 2550	45	61		53	52.8	59.1		55.9	0	0		0	38	32		35	100	100		100	5/12	5/06		5/09
Doublecrop	44	38	58	47	57.2	59.3	59.2	58.6	0	0	14	5	34	35	37	35	100	100	100	100	5/06	4/28	4/20	4/28
Roy	44	56	63	54	50.8	56.8	54.9	54.2	3	0	4	2	39	34	37	37	100	100	100	100	5/11	5/06	4/28	5/04
Hart	42	53	60	51	55.6	58.0	57.4	57.0	0	0	6	2	39	36	38	37	100	100	100	100	5/11	5/05	4/26	5/04
Pioneer S-76	42	51	54	49	57.8	58.4	57.1	57.8	0	0	11	4	38	34	35	36	100	100	100	100	5/13	5/06	4/28	5/05
Coker 916	40	56	67	55	55.0	59.1	57.1	57.1	8	0	3	3	33	32	31	32	100	100	100	100	5/08	5/02	4/23	5/01
Roland	40	51	46	46	54.3	58.4	54.1	55.6	0	0	0	0	36	32	35	34	100	100	100	100	5/13	5/08	4/29	5/06
JS 222	39			39	55.4			55.4	3			3	39			39	100			100	5/13			5/13
Feland	39	54		46	55.2	61.2		58.2	1	0		1	38	36		37	100	96		98	5/13	5/05		5/09
McNair 1003	38	61	60	53	51.5	58.8	54.6	55.0	1	0	16	6	35	34	36	35	100	100	100	100	5/10	5/06	4/28	5/04
Coker 747	38	51	58	49	54.2	61.6	56.4	57.4	0	0	79	26	34	31	34	33	100	100	100	100	5/12	5/06	4/29	5/05
Beau	34	29	47	36	56.8	60.8	59.3	59.0	0	0	0	0	34	33	37	35	100	100	100	100	5/13	5/11	4/29	5/07
Severn	33	45		39	53.3	59.0		56.1	21	0		11	38	35		37	100	100		100	5/09	5/04		5/06
Hunter	33	59	64	52	54.8	62.4	59.4	58.9	0	0	16	5	28	27	30	28	100	100	100	100	5/06	4/30	4/23	4/29
Scotty	32	48	57	46	52.5	59.7	56.6	56.3	0	0	0	0	38	33	36	36	100	98	100	99	5/13	5/07	4/29	5/06
Arthur	32	42	52	42	53.6	60.2	58.4	57.4	0	0	50	17	36	36	38	36	100	100	100	100	5/12	5/06	4/27	5/04
Abe	30	49	52	43	52.9	58.9	58.0	56.6	3	0	45	16	32	33	35	33	100	100	100	100	5/13	5/06	4/27	5/05
Arthur 71	29	42	51	41	57.2	60.2	57.9	58.4	3	0	59	20	37	34	37	36	100	100	100	100	5/13	5/06	4/27	5/05
Southern Belle	27	47	58	44	50.4	60.0	59.7	56.7	21	0	0	7	30	28	31	30	100	100	100	100	5/09	4/30	4/22	4/30

CV (1983) = 15%  
LSD (1983) = 9 bu/a

A blank space in a data column indicates that the variety was not in the test for that year.

**Table 5.—Wheat Performance Trials for Western Coal Field Region, 1981-1983.**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
Auburn	46	51	45	47	56.4	57.5	57.0	57.0	0	1	0	0	36	39	40	39	100	100	100	100	5/20	5/12	5/10	5/14
Tyler	46	61	61	56	53.7	55.2	55.9	54.9	0	8	0	3	40	40	43	41	100	100	100	100	5/16	5/09	5/02	5/09
VA 79-54-254	42	62		52	53.3	58.8		56.0	0	25		13	35	34		35	100	100		100	5/14	5/05		5/09
JS 222	40			40	55.4			55.4	0			0	39			39	100			100	5/13			5/13
Wheeler	40	55	74	56	54.4	57.3	59.1	56.9	0	11	0	4	40	41	43	41	100	100	100	100	5/14	5/07	4/30	5/06
Pioneer 2553	40			40	53.5			53.5	0			0	35			35	100			100	5/16			5/16
HW 3007	40			40	51.1			51.1	0			0	39			39	100			100	5/16			5/16
Feland	39	49		44	54.0	58.3		56.1	0	0		0	38	37		38	100	100		100	5/15	5/05		5/10
Massey	39	54		46	53.1	56.0		54.5	9	19		14	37	37		37	100	100		100	5/12	5/07		5/09
Coker 747	39	50	69	53	52.6	58.2	58.6	56.5	0	43	0	14	34	34	38	35	100	100	100	100	5/15	5/06	4/30	5/06
Fillmore	38	53		45	55.9	58.3		57.1	0	0		0	40	41		40	100	100		100	5/23	5/05		5/14
Roy	37	45	61	48	49.3	51.2	54.5	51.7	0	8	0	3	38	38	40	39	100	100	100	100	5/13	5/07	5/01	5/07
Sullivan	37	47	56	47	56.0	58.5	58.6	57.7	0	6	0	2	37	38	41	39	100	100	100	100	5/13	5/04	4/29	5/05
Caldwell	35	51	67	51	51.5	53.2	57.4	54.0	0	0	0	0	36	36	38	37	100	100	100	100	5/16	5/06	4/29	5/06
Pioneer 2550	33	57		45	54.5	55.2		54.8	0	0		0	34	37		35	100	100		100	5/17	5/07		5/12
Pioneer S-76	33	56	54	48	54.6	58.0	57.5	56.7	0	0	0	0	36	38	39	38	100	100	100	100	5/20	5/09	5/01	5/10
Hart	32	53	62	49	51.2	56.2	56.4	54.6	0	0	0	0	37	38	42	39	100	100	100	100	5/16	5/07	5/02	5/08
Hunter	32	44	63	46	54.5	57.5	59.5	57.2	0	0	0	0	29	28	32	30	100	100	100	100	5/08	5/01	4/27	5/01
Pike	31	47	59	46	52.1	54.6	57.0	54.6	0	0	0	0	36	39	39	38	100	100	100	100	5/17	5/08	4/30	5/08
Beau	31	41	47	39	56.6	57.8	59.0	57.8	0	0	0	0	35	38	38	37	100	100	100	100	5/15	5/10	5/01	5/09
Coker 916	31	44	66	47	49.1	53.9	56.1	53.0	0	10	0	3	33	33	35	34	100	100	100	100	5/11	4/30	4/27	5/02
Arthur	30	52	56	46	53.3	58.3	59.0	56.9	0	3	0	1	37	40	41	39	100	100	100	100	5/13	5/06	4/29	5/05
Scotty	30	49	58	46	53.2	55.9	56.4	55.2	0	25	0	8	37	38	40	38	100	100	100	100	5/16	5/08	5/02	5/08
Abe	30	52	59	47	54.6	57.6	57.9	56.7	0	10	0	3	34	39	39	37	100	100	100	100	5/14	5/06	4/29	5/06
McNair 1003	29	57	57	48	48.0	54.6	54.4	52.3	25	4	0	10	36	39	39	38	100	100	100	100	5/12	5/07	4/30	5/06
Doublecrop	28	38	60	42	55.4	57.5	59.1	57.3	0	14	0	5	37	35	40	37	100	100	100	100	5/10	4/29	4/24	5/01
Arthur 71	28	42	55	42	54.9	57.6	58.6	57.0	0	26	0	9	38	40	40	39	100	100	100	100	5/15	5/07	4/29	5/06
Severn	27	35		31	50.4	54.9		52.6	16	11		14	35	37		36	100	100		100	5/10	5/05		5/07
Southern Belle	27	31	69	42	52.4	61.8	58.9	57.7	0	0	0	0	31	30	34	32	100	100	100	100	5/10	4/29	4/26	5/01
Rosen	26	47	64	46	48.9	54.7	55.6	53.1	0	1	0	0	32	35	38	35	100	100	100	100	5/11	5/05	5/01	5/06
HW 3006	21	36		29	50.1	55.2		52.7	10	16		13	37	37		37	100	100		100	5/14	5/07		5/10

CV (1983) = 11%  
LSD (1983) = 5 bu/a

A blank space in a data column indicates that the variety was not in the test for that year.

**Table 6.—Wheat Performance Trials for Ohio Valley Region, 1981-1983.**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
Pioneer 2553	50			50	55.3			55.3	0			0	36			36	100			100	5/16			5/16
Feland	47	49		48	52.5	53.3		52.9	0	15		8	36	36		36	100	90		95	5/18	5/15		5/16
HW 3007	47			47	50.3			50.3	0			0	37			37	100			100	5/18			5/18
Coker 916	45	54	62	54	52.2	51.0	57.1	53.4	0	31	13	15	31	32	36	33	100	100	100	100	5/13	5/11	4/25	5/06
Hunter	45	55	52	51	55.0	59.2	60.6	58.3	8	8	0	5	29	29	34	30	100	93	100	98	5/10	5/10	4/24	5/04
Massey	44	45		45	48.6	52.5		50.5	4	34		19	37	37		37	100	100		100	5/15	5/16		5/15
HW 3006	44	38		41	50.1	47.6		48.8	0	29		14	36	37		37	100	100		100	5/16	5/14		5/15
Fillmore	43	40		41	54.6	51.1		52.8	0	38		19	40	39		40	100	100		100	5/24	5/17		5/20
Coker 747	41	47	61	50	54.4	56.2	57.5	56.0	2	26	51	27	31	32	36	33	100	100	100	100	5/19	5/13	4/30	5/11
Sullivan	40	30	43	38	48.5	56.2	57.6	54.1	0	48	69	39	36	39	38	37	100	100	100	100	5/17	5/12	4/26	5/08
VA 79-54-254	40	52		46	54.2	51.0		52.6	15	55		35	31	33		32	100	100		100	5/19	5/14		5/16
Pioneer S-76	39	43	61	48	51.1	51.1	57.5	53.2	0	44	18	21	36	36	38	37	100	100	100	100	5/18	5/14	5/01	5/11
Severn	38	40		39	51.7	54.5		53.1	0	54		27	35	39		37	100	100		100	5/16	5/13		5/14
Roy	37	38	60	45	49.5	41.9	55.7	49.0	0	5	24	10	36	37	39	37	100	100	100	100	5/16	5/15	4/28	5/09
Wheeler	37	49	59	48	56.5	57.0	57.7	57.1	0	31	61	31	37	38	39	38	100	100	100	100	5/19	5/13	4/29	5/10
Southern Belle	37	44	60	47	53.6	56.6	60.2	56.8	0	35	13	16	28	30	33	30	100	100	100	100	5/13	5/09	4/24	5/05
McNair 1003	36	46	61	48	44.7	44.7	56.0	48.5	0	39	23	20	31	36	39	36	100	98	100	99	5/16	5/14	4/28	5/09
Pike	35	42	50	42	49.7	48.4	56.4	51.5	3	33	13	16	34	37	40	37	100	100	100	100	5/20	5/14	5/01	5/11
Hart	34	36	65	45	49.4	50.2	57.0	52.2	3	25	48	25	37	39	39	38	100	100	100	100	5/16	5/14	4/27	5/08
Doublecrop	33	31	48	38	53.6	56.0	56.0	55.2	5	34	53	30	34	37	37	36	100	100	100	100	5/12	5/07	4/22	5/03
Tyler	33	35	69	46	45.8	45.0	57.6	49.5	5	35	29	23	36	37	41	38	100	100	100	100	5/19	5/16	4/30	5/11
Caldwell	31	37	62	43	54.2	44.6	56.6	51.8	0	60	63	41	32	38	36	35	100	100	100	100	5/19	5/12	4/28	5/09
Pioneer 2550	30	36		33	47.6	46.2		46.9	0	35		18	34	34		34	100	100		100	5/18	5/14		5/16
Auburn	30	41	51	40	52.4	54.8	57.6	54.9	0	15	4	6	33	37	41	37	100	100	100	100	5/22	5/16	5/06	5/14
Arthur 71	30	34	40	35	52.8	52.4	55.9	53.7	0	48	91	46	33	37	38	36	100	100	100	100	5/19	5/13	4/30	5/10
Roland	29	40	55	41	46.0	48.0	55.5	49.8	0	19	34	18	31	36	38	35	100	100	100	100	5/18	5/14	5/02	5/11
JS 222	29			29	51.4			51.4	0			0	35			35	100			100	5/19			5/19
Arthur	28	37	49	38	50.2	53.2	56.4	53.3	0	59	83	47	35	40	38	38	100	100	100	100	5/17	5/12	4/28	5/09
Scotty	28	48	63	46	52.5	53.7	57.1	54.4	0	11	40	17	34	35	39	36	100	100	100	100	5/18	5/14	5/02	5/11
Abe	26	35	45	35	48.0	44.8	56.6	49.8	0	58	70	43	33	38	38	36	100	100	100	100	5/17	5/12	4/30	5/09
Beau	22	34	50	35	51.0	56.8	59.8	55.9	0	44	25	23	32	37	38	36	100	100	100	100	5/18	5/16	5/02	5/11

CV (1983) = 23%

LSD (1983) = 12 bu/a

A blank space in a data column indicates that the variety was not in the test for that year.

**Table 7.—Wheat Performance Trials for Bluegrass Region, 1981-1983.**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
VA 79-54-254	71	57		64	56.9	61.0		58.9	88	5		46	38	31		35	100	90		95	5/19	5/13		5/16
Auburn	71	55	52	59	55.3	61.4	56.2	57.6	64	0	0	21	42	33	42	39	100	94	100	98	5/23	5/15	5/12	5/16
Scotty	70	46	78	65	53.9	59.4	60.0	57.8	90	9	0	33	40	30	44	38	100	86	100	95	5/20	5/15	5/07	5/13
Beau	70			70	59.6			59.6	8			8	40			40	100			100	5/20			5/20
Feland	70	35		52	58.1	61.8		59.9	88	4		46	42	32		37	100	93		96	5/19	5/13		5/16
Pioneer 2550	69	65		67	53.1	60.5		56.8	79	5		42	40	31		35	100	95		98	5/21	5/14		5/18
Tyler	67	36	78	60	54.2	60.3	58.9	57.8	81	3	0	28	42	33	47	41	100	94	100	98	5/21	5/14	5/08	5/14
JS 222	63			63	56.6			56.6	66			66	42			42	100			100	5/21			5/21
Caldwell	62	61	68	64	52.0	59.7	59.5	57.1	79	4	0	28	40	33	41	38	100	94	100	98	5/18	5/13	5/05	5/12
Fillmore	62	58		60	55.9	60.5		58.2	73	6		39	48	34		41	100	89		94	5/25	5/18		5/21
Massey	61	54		58	54.2	60.0		57.1	94	6		50	38	33		36	100	91		96	5/15	5/13		5/14
Hunter	61	40	80	60	55.9	62.0	62.0	60.0	88	4	0	30	33	25	37	32	100	91	100	97	5/17	5/11	5/01	5/09
Hart	60	49	72	61	55.5	59.4	59.4	58.1	18	3	0	7	41	33	46	40	100	91	100	97	5/21	5/14	5/06	5/13
Sullivan	60	44	61	55	59.5	59.5	62.0	60.3	46	4	0	17	41	33	47	40	100	93	100	98	5/20	5/13	5/05	5/12
Arthur 71	59	53	67	60	58.2	59.6	61.6	59.8	50	4	0	18	42	34	46	41	100	91	100	97	5/20	5/13	5/04	5/12
Wheeler	58	62	69	63	57.1	60.6	61.0	59.6	63	3	0	22	40	36	48	41	100	95	100	98	5/21	5/13	5/05	5/13
Arthur	57	50	68	58	59.1	59.8	60.7	59.9	49	5	0	18	41	35	48	41	100	91	100	97	5/20	5/12	5/04	5/12
Pike	57	56	67	60	54.3	60.1	60.1	58.2	73	9	0	27	38	34	43	38	100	86	100	95	5/21	5/14	5/03	5/12
Pioneer 2553	55			55	57.5			57.5	20			20	39			39	100			100	5/21			5/21
Coker 747	55	41	71	56	53.7	61.3	59.1	58.0	93	4	0	32	37	29	42	36	100	95	100	98	5/21	5/14	5/07	5/13
Pioneer S-76	55	59	61	58	56.0	59.6	57.9	57.8	15	6	0	7	42	33	44	40	100	93	100	98	5/23	5/15	5/11	5/16
Coker 916	54	42	77	58	53.6	60.9	58.2	57.6	99	5	0	35	36	27	40	34	100	94	100	98	5/14	5/10	5/01	5/08
Abe	54	57	67	59	57.7	59.6	60.9	59.4	69	5	0	25	40	34	44	39	100	93	100	98	5/20	5/14	5/05	5/12
HW 3007	51			51	53.1			53.1	84			84	39			39	100			100	5/21			5/21
Roland	49	43	60	51	47.4	58.6	56.7	54.2	45	6	0	17	39	34	43	38	100	80	100	93	5/21	5/16	5/06	5/14
Doublecrop	48	43	60	51	58.2	59.0	61.7	59.7	73	4	0	25	41	33	44	39	100	93	100	98	5/14	5/08	5/09	5/10
McNair 1003	48	43	76	56	50.9	58.3	56.6	55.3	91	5	0	32	37	32	45	38	100	88	100	96	5/16	5/14	5/07	5/12
Roy	46	51	77	58	50.1	59.8	55.3	55.1	68	5	0	24	39	35	44	39	100	91	100	97	5/18	5/14	5/07	5/12
Severn	40	55		47	52.3	60.5		56.4	80	6		43	38	36		37	100	93		96	5/16	5/13		5/14
Southern Belle	39	36	76	50	57.8	61.6	61.9	60.4	81	5	0	29	33	25	38	32	100	93	100	98	5/14	5/10	5/01	5/08
HW 3006	30	52		41	51.0	61.7		56.3	89	6		48	40	33		36	100	94		97	5/20	5/13		5/16

CV (1983) = 11%  
LSD (1983) = 9 bu/a

A blank space in a data column indicates that the variety was not in the test for that year.

**Table 8.—Wheat Performance Trials for Southern Tier Region, 1981-1983<sup>1</sup>.**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
Pioneer S-76	43	49	44	45	51.7	54.9	52.1	52.9	14	28	26	23	37	37	40	38	100	94	100	98	5/16	5/11	5/02	5/10
Fillmore	41	33		37	53.3	51.1		52.2	15	31		23	40	40		40	100	96		98	5/21	5/16		5/18
Auburn	39	30	43	37	51.8	51.7	50.8	51.4	40	38	18	32	35	37	43	38	100	96	100	99	5/20	5/15	5/09	5/14
Caldwell	38	35	56	43	52.1	49.4	54.3	51.9	3	43	93	46	35	35	41	37	100	98	100	99	5/16	5/09	5/01	5/08
Sullivan	37	32	43	37	55.6	54.4	56.0	55.3	19	45	46	37	37	40	40	39	100	91	100	97	5/12	5/08	4/29	5/06
Pioneer 2553	35			35	49.8			49.8	11			11	36			36	100			100	5/15			5/15
Tyler	35	43	55	44	50.6	52.0	51.7	51.4	25	40	29	31	40	40	43	41	100	94	100	98	5/16	5/13	5/03	5/10
Roy	34	36	41	37	47.9	50.0	48.2	48.7	6	19	8	11	38	39	41	39	100	96	100	99	5/14	5/12	5/01	5/09
Feland	32	49		41	51.8	55.3		53.5	46	13		29	36	38		37	100	86		93	5/16	5/12		5/14
Hart	32	41	59	44	50.8	53.3	54.4	52.8	11	61	28	33	36	38	41	38	100	99	100	100	5/15	5/10	4/30	5/08
VA 79-54-254	32	43		37	51.4	56.6		54.0	41	48		44	31	32		32	100	88		94	5/15	5/12		5/13
Wheeler	31	36	50	39	49.8	51.3	53.6	51.6	44	73	41	53	35	39	43	39	100	96	100	99	5/17	5/11	5/02	5/10
JS 222	30			30	52.3			52.3	31			31	35			35	100			100	5/17			5/17
Pioneer 2550	28	28		28	48.4	47.6		48.0	20	46		33	33	37		35	100	96		98	5/15	5/11		5/13
Coker 747	25	32	41	33	52.2	49.4	50.5	50.7	69	39	89	65	32	33	37	34	100	96	100	99	5/15	5/11	5/01	5/09
Coker 916	25	42	59	42	50.8	53.9	53.1	52.6	64	20	14	33	31	33	36	33	100	94	100	98	5/11	5/06	4/28	5/05
Arthur	24	31	42	32	50.0	52.4	54.1	52.2	0	91	68	53	35	36	40	37	100	98	100	99	5/15	5/09	5/01	5/08
HW 3006	24	42		33	48.2	52.7		50.4	30	8		19	35	40		38	100	94		97	5/14	5/11		5/12
Massey	24	33		28	51.6	53.1		52.3	84	85		84	35	37		36	100	94		97	5/10	5/12		5/11
Beau	24	27	48	33	50.6	56.8	57.4	54.9	3	3	8	4	32	35	43	37	100	100	100	100	5/15	5/14	5/04	5/10
HW 3007	23			23	47.8			47.8	43			43	37			37	100			100	5/17			5/17
Roland	22	32	44	33	48.4	50.2	52.6	50.4	30	40	18	29	33	37	42	38	100	88	100	96	5/16	5/11	5/02	5/09
Doublecrop	22	32	57	37	54.2	54.6	56.9	55.2	15	69	30	38	34	35	38	36	100	96	100	99	5/09	5/03	4/24	5/02
Abe	22	37	42	33	53.4	54.1	52.9	53.5	3	75	59	45	31	36	41	36	100	90	100	97	5/16	5/09	5/01	5/08
Scotty	21	32	54	36	50.0	51.2	52.9	51.4	29	13	34	25	36	36	41	37	100	89	100	96	5/15	5/12	5/02	5/09
Pike	20	28	50	33	51.6	48.0	53.4	51.0	68	89	31	63	32	36	40	36	100	99	100	100	5/16	5/12	5/01	5/09
Arthur 71	18	21	40	27	50.2	51.4	52.7	51.4	43	75	83	67	33	38	41	37	100	91	100	97	5/16	5/11	5/01	5/09
Hunter	18	40	62	40	51.6	58.3	56.0	55.3	38	0	6	15	28	30	34	31	100	79	100	93	5/10	5/09	4/27	5/05
McNair 1003	17	38	46	34	50.4	48.2	47.9	48.8	51	10	24	28	30	36	41	36	100	85	100	95	5/11	5/11	5/01	5/07
Severn	15	33		24	44.4	53.4		48.9	40	20		30	33	41		37	100	84		92	5/10	5/09		5/09
Southern Belle	13	32	57	34	50.8	52.9	56.4	53.4	18	24	15	19	27	29	34	30	100	88	100	96	5/11	5/05	4/27	5/04

CV (1983) = 20%  
LSD (1983) = 8 bu/a

<sup>1</sup>Location was Princeton, limestone soil.

A blank space in a data column indicates that the variety was not in the test for that year.

**Table 8A.—Wheat Performance Trials for Southern Tier<sup>1</sup>, 1981-1983<sup>1</sup>.**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
Tyler	55	61	59	58	53.9	54.2	55.2	54.4	0	0	0	0	40	38	44	41	100	100	100	100	5/13	5/07	4/30	5/06
HW 3006	49	54		51	56.5	57.4		56.9	0	0		0	38	36		37	100	100		100	5/12	5/04		5/08
Massey	48	54		51	56.7	57.1		56.9	0	10		5	35	35		35	100	100		100	5/09	5/05		5/07
VA 79-54-254	45	56		50	54.8	58.8		56.8	0	4		2	32	31		32	100	100		100	5/13	5/06		5/09
Fillmore	45	57		51	57.2	56.2		56.7	0	0		0	37	40		38	100	100		100	5/19	5/11		5/15
HW 3007	44			44	55.3			55.3	0			0	36			36	100			100	5/12			5/12
Auburn	43	51	33	42	57.0	56.8	55.8	56.5	0	0	0	0	35	39	39	38	100	100	100	100	5/17	5/12	5/04	5/11
Wheeler	43	59	58	53	56.1	56.4	58.5	57.0	0	0	8	3	33	38	43	38	100	100	100	100	5/13	5/07	4/29	5/06
Coker 747	42	58	53	51	57.6	58.4	57.3	57.8	0	0	0	0	31	34	36	34	100	100	100	100	5/13	5/05	4/30	5/06
Feland	41	52		46	57.5	56.1		56.8	0	0		0	36	37		36	100	100		100	5/13	5/06		5/09
Rosen	41	52	50	48	50.8	57.0	53.6	53.8	0	0	0	0	31	33	38	34	100	100	100	100	5/10	5/05	4/26	5/03
JS 222	40			40	55.2			55.2	0			0	35			35	100			100	5/13			5/13
Hunter	40	38	64	47	58.3	59.0	60.4	59.2	0	0	0	0	27	27	34	30	100	100	100	100	5/08	5/03	4/21	4/30
Pioneer 2550	40	57		48	53.4	53.3		53.3	0	3		1	33	34		33	100	100		100	5/15	5/05		5/10
Pioneer 2553	39			39	55.5			55.5	0			0	34			34	100			100	5/12			5/12
Caldwell	39	54	53	49	54.4	54.9	56.3	55.2	0	0	0	0	34	32	39	35	100	100	100	100	5/14	5/04	4/28	5/05
Roy	38	52	55	49	50.8	53.3	54.0	52.7	0	0	0	0	37	35	40	37	100	100	100	100	5/13	5/05	4/30	5/05
Severn	38	42		40	54.9	55.7		55.3	0	4		2	34	35		35	100	100		100	5/09	5/04		5/06
Sullivan	38	44	45	42	58.2	57.2	58.1	57.8	0	10	0	3	34	38	41	38	100	100	100	100	5/11	5/04	4/27	5/03
Coker 916	38	53	53	48	53.7	56.2	56.6	55.5	0	4	3	2	30	32	35	32	100	100	100	100	5/09	5/01	4/24	5/01
Pike	38	45	47	43	53.2	54.7	56.3	54.7	0	3	0	1	33	34	38	35	100	100	100	100	5/15	5/07	4/28	5/06
Pioneer S-76	38	61	53	50	56.2	54.9	57.1	56.1	0	0	0	0	33	36	40	36	100	100	100	100	5/15	5/06	4/29	5/06
McNair 1003	37	48	55	47	51.5	53.4	53.7	52.9	0	0	0	0	33	35	41	36	100	100	100	100	5/10	5/05	4/28	5/04
Southern Belle	37	47	55	47	55.8	56.4	58.1	56.8	0	0	0	0	27	27	33	29	100	100	100	100	5/08	4/30	4/22	4/30
Arthur 71	35	37	43	39	57.4	53.9	56.7	56.0	0	15	0	5	34	36	41	37	100	100	100	100	5/13	5/05	4/28	5/05
Hart	35	57	55	49	53.8	54.4	57.6	55.3	0	0	0	0	35	38	43	38	100	100	100	100	5/13	5/05	4/27	5/05
Doublecrop	34	42	49	42	56.6	57.5	59.3	57.8	0	5	8	4	32	32	41	35	100	100	100	100	5/08	4/28	4/21	4/29
Scotty	34	54	47	45	54.9	55.9	56.1	55.6	0	0	0	0	34	34	39	35	100	100	100	100	5/14	5/06	4/30	5/06
Abe	33	41	46	40	56.2	53.2	56.2	55.2	0	0	0	0	32	35	40	35	100	100	100	100	5/12	5/04	4/28	5/04
Beau	32	43	39	38	53.2	59.1	55.9	56.1	0	0	0	0	33	36	39	36	100	100	100	100	5/13	5/09	4/30	5/07
Arthur	31	41	45	39	56.4	57.8	57.7	57.3	0	4	0	1	33	36	42	37	100	100	100	100	5/12	5/04	4/28	5/04

CV (1983) = 11%  
LSD (1983) = 6 bu/a

<sup>1</sup>Location was Russellville.

A blank space in a data column indicates that the variety was not in the test for that year.

**Table 9.—Wheat Performance Trials for North Central Region, 1980<sup>1</sup>, 1982-1983<sup>2</sup>.**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (in)				Survival (%)			
	1983	1982	1980	Mean	1983	1982	1980	Mean	1983	1982	1980	Mean	1983	1982	1980	Mean	1983	1982	1980	Mean
Massey	59	65		62	57.1	58.9		58.0	1	0		1	35	34		35	100	100		100
Tyler	57	65	56	59	53.8	56.7	57.7	56.1	14	0	0	5	37	34	34	35	100	100	100	100
Feland	57	60	46	54	56.2	59.1	59.1	58.1	0	0	0	0	35	34	35	35	100	98	100	99
Pioneer 2553	55			55	55.6			55.6	0			0	35			35	100			100
Pioneer 2550	55	58	58	57	53.6	57.9	56.4	56.0	0	0	0	0	33	33	33	33	100	100	100	100
Hunter	54	53		54	59.3	61.2		60.3	3	0		1	30	26		28	100	91		96
HW 3007	53			53	52.9			52.9	0			0	35			35	100			100
VA 79-54-254	53	65		59	56.2	59.4		57.8	0	4		2	30	31		30	100	100		100
Wheeler	52	56	45	51	57.2	58.2	58.0	57.8	4	30	0	11	36	37	36	36	100	100	100	100
Fillmore	52	61		57	58.2	58.5		58.4	30	0		15	38	36		37	100	100		100
Pioneer S-76	50	49	55	51	56.3	58.3	56.8	57.1	0	0	0	0	35	33	33	34	100	100	100	100
Severn	49	41		45	56.9	56.9		56.9	28	13		20	36	35		35	100	100		100
Auburn	48	49		49	56.3	56.9		56.6	0	1		1	37	33		35	100	100		100
HW 3006	48	37		43	55.7	56.8		56.2	3	0		2	34	33		34	100	100		100
Coker 916	48	57	49	52	52.7	58.1	59.0	56.6	5	6	0	4	31	29	32	31	100	100	100	100
Coker 747	48	53		50	56.1	60.1		58.1	0	11		6	30	30		30	100	100		100
JS 222	47			47	56.6			56.6	5			5	35			35	100			100
Sullivan	46	49		48	58.1	60.0		59.0	4	8		6	36	35		35	100	100		100
Scotty	45	61	46	51	55.1	57.5	57.4	56.7	30	0	0	10	33	32	33	33	100	98	100	99
Pike	45	49		47	53.8	56.6		55.2	1	0		1	32	33		33	100	96		98
Roy	45	48		46	53.3	53.5		53.4	1	0		1	33	32		33	100	100		100
Hart	43	50	49	47	55.4	58.6	56.4	56.8	4	0	0	1	36	35	34	35	100	100	100	100
Doublecrop	43	41	25	36	56.9	59.9	57.9	58.2	40	5	0	15	34	32	32	33	100	100	100	100
Caldwell	42	61	43	49	52.6	56.9	56.3	55.3	8	6	0	5	32	32	32	32	100	100	100	100
McNair 1003	42	56	50	49	52.0	55.1	55.3	54.2	4	0	0	1	32	35	34	34	100	99	100	100
Beau	42	40		41	56.7	58.9		57.8	3	3		3	34	33		34	100	100		100
Southern Belle	41	37		39	53.4	58.8		56.1	13	3		8	27	27		27	100	100		100
Roland	41	45		43	54.7	56.8		55.7	1	0		1	32	31		31	100	96		98
Abe	40	49	40	43	56.6	59.0	58.6	58.1	9	0	0	3	33	34	32	33	100	100	100	100
Arthur 71	38	49	35	40	55.6	60.0	58.6	58.1	8	0	0	3	34	35	32	34	100	100	100	100
Arthur	37	48	37	41	56.1	59.7	58.5	58.1	5	14	0	6	33	34	34	34	100	98	100	99

CV (1983) = 10%

LSD (1983) = 6 bu/a

A blank space in a data column indicates that the variety was not in the test for that year.

<sup>1</sup>Test was grown at Elizabethtown in 1980. The 1981 test was discarded due to chemical damage.

<sup>2</sup>Heading date was not recorded.



**Table 10.—Disease Ratings of Wheat Varieties at Several Locations, 1983.**

Variety	Lexington		Owensboro			Princeton	
	Powdery Mildew <sup>1</sup>	Leaf Blotch	Powdery Mildew	Leaf Blotch	Leaf Rust <sup>2</sup>	Head Scab <sup>3</sup>	Glume Blotch
Tyler	2	4	0	3	H	1	1
Fillmore	7	6	0	5	O	1	1
VA 79-54-254	5	5	0	6	L	2	1
Pioneer 2553	7	4	7	3	O	1	1
Massey	3	4	5	4	M	1	2
Auburn	6	5	5	4	O	1	1
Feland	6	5	0	7	O	1	2
Wheeler	7	4	0	6	O	2	2
HW 3007	6	4	3	5	ML	0	2
Sullivan	8	5	6	3	L	1	1
Caldwell	7	5	3	4	O	1	2
Pioneer 2550	5	6	3	8	O	1	1
Pioneer S76	7	4	6	6	L	1	1
JS 222	7	4	3	4	O	1	2
Coker 747	6	4	3	6	O	2	2
Hunter	7	4	0	6	O	2	3
Roy	7	4	7	4	M	2	3
Coker 916	4	4	0	5	O	2	3
Hart	7	4	7	7	M	1	2
Rosen	7	5	7	4	O	2	4
Pike	7	5	5	4	L	1	2
HW 3006	8	5	7	4	M	1	3
Scotty	7	4	0	7	O	1	2
Beau	7	4	0	6	O	1	2
Doublecrop	8	4	6	8	O	1	3
McNair 1003	5	4	0	5	L	1	4
Severn	8	5	4	6	L	1	3
Arthur	7	4	6	7	O	1	2
Arthur 71	7	4	3	7	ML	1	1
Abe	8	5	6	7	L	1	2
Southern Belle	8	4	0	5	L	1	3

<sup>1</sup>A 0-9 scale was used for Powdery Mildew and Leaf Blotch: 0 = No Disease, 9 = Heavy Infestation of Flag Leaf.

<sup>2</sup>A O-H scale was used for Leaf Rust: 0 = No Disease, L, ML, M, H indicate Light, Moderately Light, Moderate and Heavy Infestations, respectively.

<sup>3</sup>A 0-5 scale was used for Head Scab and Glume Blotch: 0 = No Disease, 1 = Lowest Level of Disease Observed, 5 = Highest Level of Disease Observed.

**Table 11.—Characteristics of Barley Varieties Tested in 1983.**

Variety	Protected*	Origin	Release Date	Average of 1983 Tests Over All Locations					
				Bu/A	Lb/Bu	Heading Date	Height (In)	Lodged (%)	Survival (%)
Volbar	No	Tennessee	1974	79	42.0	5/09	40	14	100
Perry	No	Missouri	1977	61	45.3	5/07	34	7	100
Barsoy	No	Kentucky	1966	58	45.2	4/29	32	3	100
Surry	No	Virginia	1976	56	39.3	5/02	33	9	100
Milton	Yes	North Carolina	1981	53	41.0	5/09	30	10	100
Pike	Yes	Indiana	1975	51	41.0	5/03	29	12	100

CV = 19%

LSD = 8 Bu/A

\* "Unauthorized propagation prohibited." Seed of these varieties must be sold by variety name only as a class of certified seed. This includes varieties for which protection has been applied and those for which protection has been granted.

**Table 12.—Barley Performance Trials for Western Coal Field Region, 1981-1983.**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
Volbar	84	94	69	82	38.4	43.7	43.3	41.8	0	0	0	0	39	45	39	41	100	78	99	92	5/07	4/28	4/27	4/30
Milton	63			63	43.1			43.1	0			0	29			29	100			100	5/07			5/07
Barsoy	59	72	57	63	43.5	46.4	43.6	44.5	0	5	0	2	32	34	35	34	100	86	100	95	4/30	4/23	4/14	4/22
Surry	56	77	46	60	39.5	42.6	41.9	41.4	0	0	0	0	32	38	33	35	100	94	100	98	5/01	4/26	4/22	4/26
Perry	55	65	72	64	42.4	47.7	45.4	45.2	0	9	0	3	33	39	36	36	100	98	100	99	5/04	4/27	4/22	4/27
Pike	46	84	47	59	40.0	45.8	45.1	43.6	0	11	0	4	27	36	28	30	100	100	100	100	5/05	4/24	4/20	4/26

CV (1983) = 20%

LSD (1983) = 16 bu/a

**Table 13.—Barley Performance Trials for Bluegrass Region, 1981-1983.**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
Volbar	70	51	114	78	44.8	49.4	48.1	47.4	35	0	33	23	41	33	44	39	100	61	100	87	5/11	5/07	4/29	5/05
Perry	60	76	97	78	49.1	51.4	51.7	50.7	23	41	13	25	34	36	38	36	100	84	100	95	5/11	5/05	4/27	5/04
Pike	59	65	97	73	45.1	49.6	48.2	47.7	10	50	48	36	30	33	34	32	100	88	100	96	5/06	5/02	4/26	5/01
Surry	50	51	100	67	41.9	48.4	44.7	45.0	5	1	0	2	33	32	38	35	100	79	100	93	5/08	5/05	4/26	5/03
Barsoy	50	63	106	73	46.1	50.5	48.6	48.4	3	15	43	20	31	32	35	33	100	81	100	94	5/03	4/30	4/21	4/28
Milton	47			47	40.4			40.4	8			8	32			32	100			100	5/13			5/13

CV (1983) = 13%

LSD (1983) = 10 bu/a

A blank space in a data column indicates that the variety was not in the test for that year.

**Table 14.—Barley Performance Trials for Southern Tier Region, 1981-1983.<sup>1</sup>**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
Volbar	79	66	89	78	39.1	43.5	41.1	41.2	20	4	15	13	40	44	37	41	100	13	100	71	5/07	5/06	4/26	5/02
Barsoy	69	84	72	75	46.9	47.0	39.6	44.5	3	5	84	30	34	37	35	35	100	70	100	90	4/29	4/25	4/14	4/22
Perry	65	77	69	70	42.3	44.3	41.0	42.5	3	85	91	60	36	41	35	38	100	100	100	100	5/07	4/30	4/20	4/29
Pike	58	87	52	66	39.9	43.5	36.3	39.9	10	50	99	53	29	37	35	33	100	96	100	99	5/03	4/27	4/16	4/25
Surry	54	71	73	66	35.9	38.1	37.6	37.2	16	56	68	47	32	39	38	36	100	95	100	98	4/30	4/30	4/18	4/26
Milton	52			52	38.6			38.6	0			0	30			30	100			100	5/08			5/08

CV (1983) = 22%  
LSD (1983) = 20 bu/a

<sup>1</sup>Location was Princeton, limestone soil.

**Table 14A.—Barley Performance Trials for Southern Tier Region, 1981-1983.<sup>1</sup>**

Variety	Yield (Bu/A)				Test Weight (Lb/Bu)				Lodged (%)				Plant Height (In)				Survival (%)				Heading Date			
	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean	1983	1982	1981	Mean
Volbar	81	68	71	73	44.1	44.9	40.7	43.2	0	0	22	7	39	44	45	43	100	35	100	78	5/06	5/04	4/19	4/29
Surry	65	91	69	75	39.9	44.8	41.3	42.0	14	0	13	9	34	40	41	38	100	100	100	100	4/26	4/28	4/14	4/22
Perry	62	74	65	67	47.3	48.8	43.2	46.4	1	11	29	14	34	39	40	38	100	100	100	100	5/04	4/28	4/16	4/26
Barsoy	53	70	63	62	44.3	48.0	43.2	45.2	8	3	44	18	32	35	37	34	100	81	100	94	4/22	4/22	4/10	4/17
Milton	49			49	41.8			41.8	31			31	29			29	100			100	5/05			5/05
Pike	42	87	73	67	37.3	47.6	42.8	42.6	28	9	55	30	31	34	36	34	100	100	100	100	4/29	4/23	4/12	4/21

CV (1983) = 17%  
LSD (1983) = 13 bu/a

<sup>1</sup>Location was Russellville.

A blank space in a data column indicates that the variety was not in the test for that year.