

Progress Report 283

1984
Kentucky
Small Grain
Variety Trials

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1984 Kentucky Small Grain Variety Trials

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In 1984, Kentucky farmers harvested 18 million bushels of soft red winter wheat produced on 500,000 acres. The average yield of 36 bu/a was up from the 1983 average of 35 bu/a. Barley production was up 45% from 1982 levels with a yield average of 40 bu/a.

Table 1.—Small Grain Harvested Acreage and Yields in Kentucky, 1982-1984.*

Crop	1984		1983		1982	
	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A
Wheat	500	36	580	35	675	39
Barley	30	40	25	38	32	48
Oats	6	44	6	42	7	43
Rye	3	30	3	29	2	27

*July 1, 1984, 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.

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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

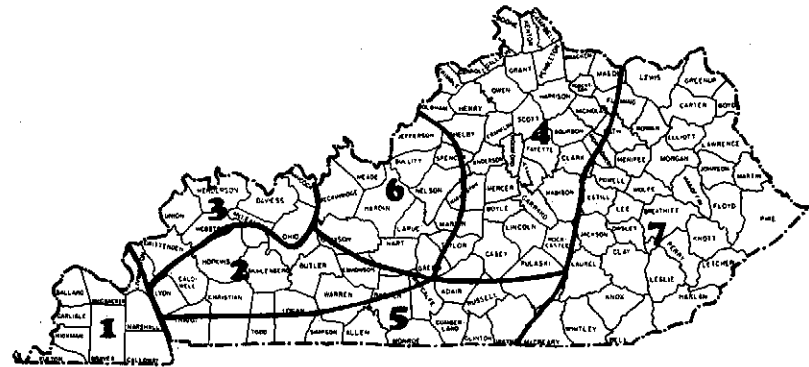


Figure 1.—Agro-climatic regions of Kentucky small grain variety trials.

Region	1984 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	Miles Farm	Wheat
4 Bluegrass	Lexington	Kentucky Agricultural Experiment Station	Barley, Wheat
5 Southern Tier	Russellville Princeton (Limestone soil)	Eddy Russell 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, 1982-84.

Region	Location	Preceding Crop	Crop	Planting Date		
				1984	1983	1982
Purchase	Mayfield	1982 Soybeans	Wheat	11/8	10/18	10/30
	Hickman	1983 Corn				
		1984 Fallow				
Western Coal Field	Princeton (Sandstone soil)	Fallow	Barley	11/1	10/13	10/14
			Wheat	11/1	10/13	10/14
Ohio Valley	Owensboro	1982 Corn	Wheat	11/7	10/25	10/29
		1983 Soybeans				
		1984 Tobacco				
Bluegrass	Lexington	Fallow	Barley	10/28	9/29	10/15
			Wheat	10/28	10/15	10/22
Southern Tier	Hopkinsville	1982 Corn	Barley	10/31	10/15	10/15
	Russellville	1983-84 Corn	Wheat	10/31	10/15	10/15
	Princeton (Limestone soil)	Fallow	Barley	11/1	10/14	10/06
			Wheat	11/1	10/14	11/02
North Central	Greensburg	1982-84 Soybeans	Wheat	10/28	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. Thus, differences in varietal ratings may reflect factors such as maturity, as well as genetic differences in disease resistance.

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.

1984 TEST CONDITIONS

An extremely dry summer in 1983 followed by an unusually wet October delayed seeding of small grains across the state.

Cold, wet weather prevailed in November and early season growth of wheat and barley was minimal. Sub-zero temperatures

were recorded across the state in late December and early January. The absence of insulating snow cover during this period resulted in substantial winterkill of both barley and wheat. A freeze in late March also contributed to winter injury in these crops. Winterkill was so severe in barley test plots that no results are reported for 1984 (Tables 11-14A).

A late cool spring slowed growth of the wheat crop so that heading dates were later than usual. Poor spring growth and reduced stands due to winterkill created severe weed problems for many farmers.

Disease pressure was less intense in 1984 than in previous years. Powdery mildew was observed late and generally was not a problem. Septoria leaf blotch was abundant but was not believed to affect yields significantly. Leaf rust was present in most locations and where infection occurred early in the grain filling period, yields and test weights were reduced. Stem rust, caused by a different pathogen than leaf rust, was observed in significant numbers for the first time in Kentucky in 1984. Disease ratings for 2 locations are presented in Table 10.

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 conditions 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.

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.

SMALL GRAIN VARIETIES FOR 1985

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.

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 Pike.

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 1984.

Variety	Protection ^{3/}	Source	Release Date	Average of 1984 Tests Over 7 Locations					
				Yield (Bu/A)	Test Weight (Lb/Bu)	Heading Date	Height (in)	Lodging (%)	Survival (%)
* BH 203	No	Cargill, Inc.	--	60	56.6	5/23	41	5	45
Abe	Yes	Indiana	1972	58	57.0	5/20	39	7	59
Tyler	No	Virginia	1980	57	53.4	5/21	40	6	63
Compton	Yes	Indiana	1983	57	58.0	5/20	37	5	60
2550	Yes	Pioneer Hi-Bred International	1982	56	55.1	5/19	35	4	51
Coker 747	Yes	Coker's Pedigreed Seeds	1977	56	57.6	5/20	36	9	56
* BH 301	No	Cargill, Inc.	--	54	55.8	5/24	41	5	40
S-76	Yes	Pioneer Hi-Bred International	1976	54	56.0	5/20	37	3	59
Pike	Yes	Missouri	1980	54	54.8	5/21	37	8	49
Scotty	No	Illinois	1982	53	55.1	5/21	36	9	54
Massey	No	Virginia	1981	53	55.4	5/21	39	7	46
Auburn	Yes	Indiana	1980	53	55.0	5/23	39	4	62
* BH 201	No	Cargill, Inc.	--	53	56.1	5/20	38	1	31
Hart	No	Missouri	1976	53	55.5	5/20	38	1	53
Magnum	Yes	North American Plant Breeders	1983	52	56.5	5/19	34	6	58
Wheeler	No	Virginia	1980	52	56.2	5/21	40	3	39
JS 222	Yes	J. M. Schultz Seed Company	1981	52	55.2	5/21	39	1	46
Fillmore	Yes	Indiana	1982	52	54.3	5/24	41	8	51
* BH 202	No	Cargill, Inc.	--	51	53.9	5/20	37	1	30
* BH 310	No	Cargill, Inc.	--	50	54.9	5/23	38	2	42

Table 3.—Continued.

Variety	Protected ^{3/}	Source	Release Date	Average of 1984 Tests Over 7 Locations					
				Yield (Bu/A)	Test Weight (Lb/Bu)	Heading Date	Height (in)	Lodging (%)	Survival (%)
Caldwell	Yes	Indiana	1980	49	54.1	5/21	36	6	42
Beau	Yes	Indiana	1976	49	57.8	5/20	36	4	50
Arthur	No	Indiana	1968	48	57.6	5/19	38	5	49
Arthur 71	Yes	Indiana	1971	48	57.7	5/19	38	8	49
Sullivan	Yes	Indiana	1977	48	56.8	5/19	38	8	39
Saluda	No	Virginia	1983	48	55.7	5/21	32	3	34
McNair 1003	Yes	Northrup King Seeds	1977	45	51.3	5/22	37	1	24
Doublecrop	No	Arkansas	1975	44	58.1	5/14	36	4	56
Feland	Yes	Southern States	1982	43	55.7	5/22	36	0	27
* BH 100	No	Cargill, Inc.	--	43	54.6	5/20	36	0	24
Coker 916	Yes	Coker's Pedigreed Seeds	1982	43	55.2	5/19	33	6	25
Hunter	Yes	North American Plant Breeders	1982	36	54.8	5/20	32	0	20
Coker 983	Yes	Coker's Pedigreed Seeds	1984	22	53.9	5/25	32	2	10

* Hybrid Wheats

CV = 15%^{1/}
 LSD(.05) = 4 Bu/A^{2/}

^{1/} The CV is a measure of experimental error. The lower the CV, the more reliable the results.

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

^{3/} "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, 1982-1984.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				--- PLANT HEIGHT (IN) ---				-- PCT SURVIVAL --				HEADING DATE			
	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN
MASSEY	51	52	68	57	56.9	55.6	60.2	57.6	0	3	0	1	39	39	36	38	36	100	100	79	17MAY	08MAY	04MAY	10MAY
BH 301	51	.	.	51	57.0	.	.	57.0	0	.	.	0	39	.	.	39	31	.	.	31	19MAY	.	.	19MAY
ABE	50	30	49	43	56.5	52.9	58.9	56.1	0	3	0	1	40	32	33	35	49	100	100	83	17MAY	13MAY	06MAY	12MAY
BH 203	49	.	.	49	57.4	.	.	57.4	0	.	.	0	39	.	.	39	26	.	.	26	18MAY	.	.	18MAY
BH 202	48	.	.	48	57.6	.	.	57.6	0	.	.	0	36	.	.	36	25	.	.	25	15MAY	.	.	15MAY
TYLER	48	54	57	53	54.4	55.5	58.8	56.2	0	15	0	5	40	41	35	39	43	100	100	81	17MAY	13MAY	01MAY	11MAY
BH 201	47	.	.	47	57.4	.	.	57.4	0	.	.	0	35	.	.	35	29	.	.	29	14MAY	.	.	14MAY
CUMPTON	45	.	.	45	55.8	.	.	55.8	0	.	.	0	34	.	.	34	38	.	.	38	16MAY	.	.	16MAY
2550	44	45	61	50	56.3	52.8	59.1	56.1	0	0	0	0	32	38	32	34	33	100	100	78	15MAY	12MAY	06MAY	11MAY
AUBURN	44	49	31	41	54.8	56.9	60.6	57.4	0	0	0	0	28	37	33	36	34	100	100	78	19MAY	19MAY	11MAY	16MAY
COKER 747	42	38	51	44	58.8	54.2	61.6	58.2	0	0	0	0	34	34	31	33	41	100	100	80	14MAY	12MAY	06MAY	11MAY
BH 310	41	.	.	41	56.4	.	.	56.4	0	.	.	0	37	.	.	37	29	.	.	29	18MAY	.	.	18MAY
WHEELER	41	48	51	47	57.2	57.4	59.7	58.1	0	0	0	0	27	40	38	38	30	100	100	77	17MAY	13MAY	06MAY	12MAY
HART	40	42	53	45	54.8	55.6	58.0	56.1	0	0	0	0	34	39	36	36	36	100	100	79	14MAY	11MAY	05MAY	10MAY
JS 222	40	39	.	40	54.5	55.4	.	54.9	0	3	.	1	37	39	.	38	30	100	.	65	17MAY	13MAY	.	16MAY
FILLMORE	38	56	28	41	53.0	58.1	59.2	56.8	0	0	0	0	38	41	34	38	30	100	100	77	21MAY	18MAY	14MAY	18MAY
S-76	37	42	51	43	55.0	57.8	58.4	57.1	0	0	0	0	35	38	34	36	39	100	100	80	14MAY	13MAY	06MAY	11MAY
FELAND	34	39	54	42	56.7	55.2	61.2	57.7	0	1	0	0	35	39	36	36	23	100	96	73	17MAY	13MAY	05MAY	12MAY
MAGNUM	34	.	.	34	56.3	.	.	56.3	0	.	.	0	31	.	.	31	35	.	.	35	15MAY	.	.	15MAY
CALDWELL	33	53	47	45	54.4	55.4	57.7	55.8	0	0	0	0	34	37	33	34	24	100	100	75	17MAY	12MAY	06MAY	12MAY
ARTHUR 71	33	29	42	35	56.2	57.2	60.2	57.9	0	3	0	1	35	37	34	35	29	100	100	76	14MAY	13MAY	06MAY	11MAY
SULLIVAN	33	47	40	40	59.3	57.3	60.0	58.9	0	0	0	0	35	39	34	36	25	100	100	75	14MAY	11MAY	04MAY	10MAY
PIKE	33	48	49	43	57.0	55.9	59.4	57.4	0	3	0	1	35	38	34	35	19	100	100	72	18MAY	13MAY	07MAY	13MAY
DOUBLECROP	32	44	38	38	53.8	57.2	59.3	56.8	0	0	0	0	33	34	35	34	35	100	100	78	10MAY	06MAY	28APR	05MAY
ARTHUR	31	32	42	35	57.2	53.6	60.2	57.0	0	0	0	0	35	36	36	35	28	100	100	76	14MAY	12MAY	06MAY	11MAY
BH 100	30	.	.	30	56.4	.	.	56.4	0	.	.	0	35	.	.	35	24	.	.	24	14MAY	.	.	14MAY
MCHAIR 1003	29	38	61	43	53.6	51.5	58.8	54.6	0	1	0	0	33	35	34	34	18	100	100	73	17MAY	10MAY	06MAY	11MAY
SCOTTY	28	32	48	36	53.6	52.5	59.7	55.3	0	0	0	0	32	38	33	34	28	100	98	75	17MAY	13MAY	07MAY	12MAY
BEAU	27	34	29	30	58.0	56.9	60.8	58.5	0	0	0	0	32	34	33	33	23	100	100	74	16MAY	13MAY	11MAY	13MAY
SALUDA	26	49	54	43	57.0	52.8	61.0	56.9	0	0	0	0	30	32	31	31	21	100	100	74	17MAY	13MAY	06MAY	12MAY
COKER 916	21	40	56	39	56.0	55.0	59.1	56.7	0	8	0	3	28	33	32	31	13	100	100	71	15MAY	08MAY	02MAY	09MAY
COKER 983	21	.	.	21	58.4	.	.	58.4	0	.	.	0	30	.	.	30	13	.	.	13	19MAY	.	.	19MAY
HUNTER	18	33	59	37	58.8	54.8	62.4	58.7	0	0	0	0	27	28	27	27	15	100	100	72	14MAY	06MAY	30APR	07MAY

CV (1984) = 24%
LSD (1984) = 12 Bu/A

Table 5.—Wheat Performance Trials for Western Coal Field Region, 1982-1984.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN
BH 203	51	.	.	51	60.1	.	.	60.1	0	.	.	0	38	.	.	38	51	.	.	51	22MAY	.	.	22MAY
ABE	49	30	52	44	57.1	54.6	57.6	56.4	0	0	10	3	39	34	39	37	69	100	100	90	20MAY	14MAY	06MAY	14MAY
BH 301	49	.	.	49	56.3	.	.	56.3	0	.	.	0	39	.	.	39	43	.	.	43	23MAY	.	.	23MAY
WHEELER	48	40	55	48	58.5	54.4	57.3	56.7	0	0	11	4	36	40	41	39	61	100	100	87	19MAY	14MAY	07MAY	14MAY
JS 222	46	40	.	43	56.8	55.4	.	56.1	0	0	.	0	37	39	.	38	70	100	.	85	19MAY	13MAY	.	17MAY
BH 310	46	.	.	46	57.0	.	.	57.0	0	.	.	0	36	.	.	36	46	.	.	46	22MAY	.	.	22MAY
PIKE	46	31	47	41	56.0	52.1	54.6	54.2	0	0	0	0	34	36	39	36	69	100	100	90	19MAY	17MAY	08MAY	15MAY
S-76	46	33	56	45	58.2	54.6	58.0	56.9	0	0	0	0	35	36	38	36	65	100	100	88	20MAY	20MAY	09MAY	17MAY
AUBURN	46	46	51	48	58.5	56.4	57.5	57.5	0	0	1	0	36	36	39	37	71	100	100	90	21MAY	20MAY	12MAY	18MAY
SCOTTY	46	30	49	42	57.9	53.2	55.9	55.7	0	0	25	8	35	37	38	37	66	100	100	99	20MAY	16MAY	08MAY	15MAY
FILLMORE	46	38	53	45	55.7	55.9	58.3	56.6	0	0	0	0	39	40	41	40	64	100	100	88	24MAY	23MAY	14MAY	20MAY
TYLER	45	46	61	51	55.4	53.7	55.2	54.8	0	0	8	3	37	40	40	39	70	100	100	90	21MAY	16MAY	09MAY	15MAY
MASSEY	45	39	54	46	58.9	53.1	56.0	56.0	0	9	19	9	36	37	37	37	56	100	100	85	20MAY	12MAY	07MAY	13MAY
2550	41	33	57	44	55.0	54.5	55.2	54.9	0	0	0	0	33	34	37	35	63	100	100	88	19MAY	17MAY	07MAY	15MAY
COKER 747	40	39	50	43	58.7	52.6	58.2	56.5	0	0	43	14	33	34	34	34	65	100	100	88	19MAY	15MAY	06MAY	13MAY
BH 201	39	.	.	39	56.1	.	.	56.1	0	.	.	0	36	.	.	36	30	.	.	30	19MAY	.	.	19MAY
CUMPTON	38	.	.	38	59.4	.	.	59.4	0	.	.	0	34	.	.	34	61	.	.	61	20MAY	.	.	20MAY
BH 202	36	.	.	36	50.0	.	.	50.0	0	.	.	0	35	.	.	35	34	.	.	34	19MAY	.	.	19MAY
SALUDA	35	42	62	46	58.4	53.3	58.8	56.8	0	0	25	8	29	35	34	33	45	100	100	82	20MAY	14MAY	05MAY	13MAY
PELAND	33	39	49	40	58.8	54.0	58.3	57.0	0	0	0	0	34	38	37	37	40	100	100	80	20MAY	15MAY	05MAY	14MAY
CALDWELL	33	35	51	40	55.2	51.5	53.2	53.3	0	0	0	0	34	36	36	35	51	100	100	84	20MAY	16MAY	06MAY	14MAY
HUNTER	32	32	44	36	56.0	54.5	57.5	56.0	0	0	0	0	29	29	28	28	13	100	100	71	18MAY	08MAY	01MAY	09MAY
HART	31	32	53	39	56.0	51.2	56.2	54.5	0	0	0	0	36	37	39	37	61	100	100	87	19MAY	16MAY	07MAY	14MAY
MCNAIR 1003	30	29	57	39	51.6	48.0	54.6	51.4	0	25	4	10	34	36	39	36	26	100	100	75	21MAY	12MAY	07MAY	13MAY
COKER 983	28	.	.	28	54.2	.	.	54.2	0	.	.	0	32	.	.	32	16	.	.	16	23MAY	.	.	23MAY
COKER 916	27	31	44	34	54.6	49.1	53.9	52.5	0	0	10	3	30	33	33	32	29	100	100	76	17MAY	11MAY	30APR	09MAY
BH 100	26	.	.	26	53.4	.	.	53.4	0	.	.	0	34	.	.	34	21	.	.	21	18MAY	.	.	18MAY
BEAU	24	31	41	32	55.2	56.6	57.8	56.5	0	0	0	0	33	35	38	35	65	100	100	88	19MAY	15MAY	10MAY	15MAY
ARTHUR 71	24	28	42	31	58.4	54.9	57.6	57.0	0	0	26	9	33	38	40	37	50	100	100	83	18MAY	15MAY	07MAY	14MAY
ARTHUR	24	30	52	35	58.0	53.3	58.3	56.5	0	0	3	1	35	37	40	37	63	100	100	89	18MAY	13MAY	06MAY	12MAY
MAGNUM	24	.	.	24	58.2	.	.	58.2	0	.	.	0	30	.	.	30	59	.	.	59	16MAY	.	.	16MAY
SULLIVAN	19	37	47	34	49.0	56.0	58.5	54.5	0	0	6	2	32	37	38	36	35	100	100	78	18MAY	13MAY	04MAY	12MAY
DOUBLECROP	14	28	38	27	58.8	55.4	57.5	57.2	0	0	14	5	34	37	35	35	68	100	100	89	12MAY	10MAY	29APR	07MAY

CV (1984) = 20%
LSD (1984) = 10 Bu/A

Table 6.—Wheat Performance Trials for Ohio Valley Region, 1982-1984.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN
ABE	61	26	35	41	50.6	48.0	44.8	47.8	45	0	58	34	37	33	38	36	29	100	100	76	24MAY	17MAY	12MAY	18MAY
COMPTON	58	.	.	58	54.2	.	.	54.2	36	.	.	36	34	.	.	34	24	.	.	24	25MAY	.	.	25MAY
2550	58	30	36	41	49.1	47.6	46.2	47.6	29	0	35	21	35	34	34	34	18	100	100	73	24MAY	18MAY	14MAY	19MAY
MAGNUM	57	.	.	57	52.5	.	.	52.5	40	.	.	40	35	.	.	35	24	.	.	24	24MAY	.	.	24MAY
SULLIVAN	56	40	30	42	53.5	48.5	56.2	52.7	39	0	48	29	37	36	39	37	19	100	100	73	23MAY	17MAY	12MAY	17MAY
DOUBLECROP	56	33	31	40	53.9	53.6	56.0	54.5	25	5	34	21	37	34	37	36	19	100	100	73	20MAY	12MAY	07MAY	13MAY
ARTHUR	55	28	37	40	54.4	50.2	53.2	52.6	34	0	59	31	37	35	40	37	19	100	100	73	23MAY	17MAY	12MAY	18MAY
BEAU	55	22	34	37	54.5	51.0	56.8	54.1	25	0	44	23	32	32	37	34	21	100	100	74	25MAY	18MAY	16MAY	20MAY
WHEELER	54	37	49	47	49.9	56.5	57.0	54.5	18	0	31	16	37	37	38	37	19	100	100	73	26MAY	19MAY	13MAY	20MAY
BH 201	54	.	.	54	50.7	.	.	50.7	8	.	.	8	38	.	.	38	14	.	.	14	24MAY	.	.	24MAY
ARTHUR 71	50	30	34	38	53.2	52.8	52.4	52.8	36	0	48	28	37	33	37	36	16	100	100	72	23MAY	19MAY	13MAY	19MAY
COKER 747	50	41	47	46	49.9	54.4	56.2	53.5	64	2	26	31	34	31	32	32	16	100	100	72	24MAY	19MAY	13MAY	19MAY
JS 222	49	29	.	39	50.4	51.4	.	50.9	9	0	.	4	38	35	.	37	15	100	.	58	27MAY	19MAY	.	23MAY
PIKE	49	35	42	42	50.3	49.7	48.4	49.5	53	3	33	29	36	34	37	36	16	100	100	72	26MAY	20MAY	14MAY	20MAY
SCOTTY	49	28	48	42	49.5	52.5	53.7	51.9	63	0	11	25	36	34	35	35	19	100	100	73	27MAY	18MAY	14MAY	20MAY
BH 202	48	.	.	48	48.7	.	.	48.7	10	.	.	10	35	.	.	35	15	.	.	15	24MAY	.	.	24MAY
HART	48	34	36	39	50.9	49.4	50.2	50.2	9	3	25	12	35	37	39	37	18	100	100	73	26MAY	16MAY	14MAY	19MAY
BH 203	47	.	.	47	49.6	.	.	49.6	38	.	.	38	40	.	.	40	15	.	.	15	29MAY	.	.	29MAY
SALUDA	47	40	52	46	49.4	54.2	51.0	51.5	21	15	55	30	31	31	33	31	12	100	100	71	25MAY	19MAY	14MAY	19MAY
BH 100	46	.	.	46	49.9	.	.	49.9	0	.	.	0	33	.	.	33	10	.	.	10	24MAY	.	.	24MAY
COKER 916	45	45	54	48	50.1	52.2	51.0	51.1	40	0	31	24	37	31	32	33	5	100	100	68	24MAY	13MAY	11MAY	16MAY
MCAIR 1003	45	36	46	43	46.7	44.7	44.7	45.4	8	0	39	15	36	31	36	34	11	100	98	70	26MAY	16MAY	14MAY	19MAY
S-76	45	39	43	42	51.2	51.1	51.1	51.1	18	0	21	13	35	36	36	36	24	100	100	75	25MAY	18MAY	14MAY	19MAY
CALDWELL	45	31	37	38	49.5	54.2	44.6	49.4	43	0	60	34	36	32	38	35	14	100	100	71	25MAY	19MAY	12MAY	19MAY
BH 301	44	.	.	44	52.0	.	.	52.0	36	.	.	36	40	.	.	40	11	.	.	11	30MAY	.	.	30MAY
TYLER	41	33	35	36	46.1	45.8	45.0	45.6	40	5	35	27	37	36	37	37	23	100	100	74	27MAY	19MAY	16MAY	21MAY
BH 310	41	.	.	41	49.9	.	.	49.9	11	.	.	11	36	.	.	36	14	.	.	14	30MAY	.	.	30MAY
AUBURN	41	30	41	37	49.3	52.4	54.8	52.2	31	0	15	15	39	33	37	36	24	100	100	75	28MAY	22MAY	16MAY	22MAY
FILLMORE	40	43	40	41	49.8	54.6	51.1	51.8	55	0	38	31	41	40	39	40	23	100	325	149	29MAY	24MAY	17MAY	24MAY
MASSEY	38	44	45	42	49.0	48.6	52.5	50.0	48	4	34	28	37	37	37	37	13	100	100	71	27MAY	15MAY	16MAY	19MAY
FELAND	31	47	49	42	49.2	52.5	53.3	51.6	3	0	15	6	35	36	36	36	4	100	90	65	26MAY	18MAY	15MAY	20MAY
COKER 983	21	.	.	21	51.2	.	.	51.2	15	.	.	15	32	.	.	32	2	.	.	2	28MAY	.	.	28MAY
HUNTER	20	45	55	40	50.2	55.0	59.2	54.8	3	8	8	6	30	29	29	29	1	100	93	65	24MAY	10MAY	10MAY	15MAY

CV (1984) = 16%
LSD (1984) = 10 Bu/A

Table 7.—Wheat Performance Trials for Bluegrass Region, 1982-1984.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN
CONPTON	76	.	.	76	58.2	.	.	58.2	0	.	.	0	40	.	.	40	93	.	.	93	24MAY	.	.	24MAY
SCOTTY	76	70	46	64	56.2	53.9	59.4	56.5	0	90	9	33	40	40	30	37	90	100	86	92	24MAY	20MAY	15MAY	20MAY
SALUDA	75	71	57	68	56.9	56.9	61.0	58.3	0	88	5	31	36	38	31	35	79	100	90	90	23MAY	19MAY	13MAY	19MAY
2550	74	69	65	69	54.7	53.1	60.5	56.1	0	79	5	28	39	40	31	37	83	100	95	93	23MAY	21MAY	14MAY	20MAY
ABE	72	54	57	61	58.3	57.7	59.6	58.5	5	69	5	26	42	40	34	39	91	100	93	95	23MAY	20MAY	14MAY	19MAY
COKER 747	71	55	41	56	58.4	53.7	61.3	57.8	0	93	4	32	39	37	29	35	86	100	95	94	23MAY	21MAY	14MAY	19MAY
PIKE	70	57	56	61	53.7	54.3	60.1	56.0	0	73	9	27	41	38	34	38	86	100	86	91	24MAY	21MAY	14MAY	20MAY
HAGNUN	69	.	.	69	53.4	.	.	53.4	0	.	.	0	38	.	.	38	90	.	.	90	23MAY	.	.	23MAY
CALDWELL	69	62	61	64	53.7	52.0	59.7	55.1	0	79	4	28	38	40	33	37	79	100	94	91	23MAY	18MAY	13MAY	18MAY
AUBURN	69	71	55	65	52.1	55.3	61.4	56.3	0	64	0	21	41	42	33	39	88	100	94	94	25MAY	23MAY	15MAY	21MAY
BH 203	68	.	.	68	55.7	.	.	55.7	0	.	.	0	43	.	.	43	81	.	.	81	25MAY	.	.	25MAY
BEAU	67	70	.	69	59.7	59.6	.	59.6	0	8	.	4	41	40	.	41	79	100	.	89	25MAY	.	.	25MAY
S-76	67	55	59	60	54.8	56.0	59.6	56.8	0	15	6	7	39	42	33	38	78	100	93	90	24MAY	23MAY	15MAY	21MAY
ARTHUR	66	57	50	58	58.5	59.1	59.8	59.1	0	49	5	18	43	41	35	40	78	100	91	90	23MAY	20MAY	12MAY	19MAY
TYLER	66	67	36	56	52.8	54.2	60.3	55.8	0	81	3	28	43	42	33	39	88	100	94	94	25MAY	21MAY	14MAY	20MAY
WHEELER	65	58	62	62	57.2	57.1	60.6	58.3	0	63	3	22	43	40	36	40	66	100	95	87	26MAY	21MAY	13MAY	20MAY
FILLMORE	65	62	58	62	53.7	55.9	60.5	56.7	0	73	6	26	43	48	34	42	83	100	89	90	26MAY	25MAY	18MAY	23MAY
FELAND	64	70	35	56	55.5	58.1	61.8	58.5	0	88	4	30	39	42	32	37	54	100	93	82	26MAY	19MAY	13MAY	20MAY
ARTHUR 71	64	59	53	59	57.4	58.2	59.6	58.4	18	50	4	24	43	42	34	40	78	100	91	90	24MAY	20MAY	13MAY	19MAY
DOUBLECROP	64	48	43	52	61.6	58.2	59.0	59.6	0	73	4	25	40	41	33	38	91	100	93	95	18MAY	14MAY	08MAY	13MAY
BH 201	63	.	.	63	53.1	.	.	53.1	0	.	.	0	43	.	.	43	63	.	.	63	24MAY	.	.	24MAY
JS 222	63	63	.	63	52.5	56.6	.	54.5	0	66	.	33	42	42	.	42	68	100	.	84	25MAY	21MAY	.	24MAY
SULLIVAN	63	60	44	56	58.4	59.5	59.5	59.1	16	46	4	22	43	41	33	39	70	100	93	88	24MAY	20MAY	13MAY	19MAY
MASSEY	61	61	54	59	53.6	54.2	60.0	55.9	0	94	6	33	43	38	33	38	68	100	91	86	25MAY	15MAY	13MAY	18MAY
HART	60	60	49	57	54.7	55.5	59.4	56.5	0	18	3	7	42	41	33	39	70	100	91	87	25MAY	21MAY	14MAY	20MAY
BH 202	58	.	.	58	53.4	.	.	53.4	0	.	.	0	41	.	.	41	54	.	.	54	25MAY	.	.	25MAY
BH 100	56	.	.	56	54.7	.	.	54.7	0	.	.	0	39	.	.	39	55	.	.	55	24MAY	.	.	24MAY
BH 301	55	.	.	55	53.6	.	.	53.6	0	.	.	0	43	.	.	43	71	.	.	71	28MAY	.	.	28MAY
HCNAIR 1003	52	48	43	48	46.2	50.9	58.3	51.8	0	91	5	32	40	37	32	37	43	100	88	77	26MAY	16MAY	14MAY	19MAY
BH 310	51	.	.	51	51.4	.	.	51.4	0	.	.	0	41	.	.	41	71	.	.	71	26MAY	.	.	26MAY
COKER 916	49	54	42	49	53.3	53.6	60.9	55.9	0	99	5	35	37	36	27	33	45	100	94	80	24MAY	14MAY	10MAY	16MAY
HUNTER	36	61	40	46	49.2	55.9	62.0	55.7	0	88	4	30	35	33	25	31	31	100	91	74	26MAY	17MAY	11MAY	18MAY
COKER 983	23	.	.	23	48.2	.	.	48.2	0	.	.	0	34	.	.	34	20	.	.	20	30MAY	.	.	30MAY

CV (1984) = 12%
LSD (1984) = 10 Bu/A

Table 8.—Wheat Performance Trials for Southern Tier Region, 1982-1984.¹

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				--- PLANT HEIGHT (IN) ---				-- PCT SURVIVAL --				HEADING DATE			
	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN
BH 203	69	.	.	69	57.2	.	.	57.2	0	.	.	0	41	.	.	41	40	.	.	40	21MAY	.	.	21MAY
BH 301	64	.	.	64	56.9	.	.	56.9	0	.	.	0	42	.	.	42	31	.	.	31	24MAY	.	.	24MAY
MAGNUM	62	.	.	62	56.6	.	.	56.6	0	.	.	0	36	.	.	36	46	.	.	46	19MAY	.	.	19MAY
BH 310	61	.	.	61	56.3	.	.	56.3	0	.	.	0	39	.	.	39	31	.	.	31	22MAY	.	.	22MAY
COKER 747	60	25	32	39	55.4	52.2	49.4	52.3	0	69	39	36	37	32	33	34	53	100	96	83	19MAY	15MAY	11MAY	15MAY
CCHPTON	60	.	.	60	57.2	.	.	57.2	0	.	.	0	39	.	.	39	60	.	.	60	19MAY	.	.	19MAY
AUBURN	60	39	30	43	56.7	51.8	51.7	53.4	0	40	38	26	39	35	37	37	66	100	96	88	22MAY	20MAY	15MAY	19MAY
FILLMORE	60	41	33	45	54.5	53.3	51.1	53.0	0	15	31	15	42	40	40	41	36	100	96	78	25MAY	21MAY	16MAY	21MAY
CALDWELL	59	38	35	44	53.5	52.1	49.4	51.7	0	3	43	15	36	35	35	35	36	100	98	78	21MAY	16MAY	09MAY	16MAY
ARTHUR 71	58	18	21	33	57.4	50.2	51.4	53.0	0	43	75	39	41	33	38	37	53	100	91	81	18MAY	16MAY	11MAY	15MAY
PIKE	57	20	28	35	54.1	51.6	48.0	51.2	0	68	89	52	37	32	36	35	38	100	99	79	21MAY	16MAY	12MAY	16MAY
SCOTTY	57	21	32	37	55.0	50.0	51.2	52.1	0	29	13	14	38	36	36	36	50	100	89	80	21MAY	15MAY	12MAY	16MAY
ABE	56	22	37	38	56.9	53.4	54.1	54.8	0	3	75	26	39	31	36	35	58	100	90	83	18MAY	16MAY	09MAY	15MAY
MCHAIR 1003	56	17	38	37	50.0	50.4	48.2	49.5	0	51	10	20	38	30	36	35	19	100	85	68	22MAY	11MAY	11MAY	15MAY
2550	55	28	28	37	52.0	48.4	47.6	49.3	0	20	46	22	36	33	37	35	39	100	96	78	19MAY	15MAY	11MAY	15MAY
HART	55	32	41	43	53.1	50.8	53.3	52.4	0	11	61	24	39	36	38	38	36	100	99	78	19MAY	15MAY	10MAY	15MAY
S-76	55	43	49	49	54.2	51.7	54.9	53.6	0	14	28	14	37	37	37	37	58	100	94	84	20MAY	16MAY	11MAY	16MAY
BEAU	54	24	27	35	57.1	50.6	56.8	54.8	0	3	3	2	37	32	35	35	40	100	100	80	19MAY	15MAY	14MAY	16MAY
ARTHUR	53	24	31	36	55.8	50.0	52.4	52.7	0	0	91	30	41	35	36	37	48	100	98	82	18MAY	15MAY	09MAY	14MAY
WHPELER	52	31	36	40	54.1	49.8	51.3	51.7	0	44	73	39	41	35	39	38	26	100	96	74	22MAY	17MAY	11MAY	17MAY
TYLER	52	35	43	43	52.1	50.6	52.0	51.6	0	25	40	22	41	40	40	40	50	100	94	81	20MAY	16MAY	13MAY	17MAY
BH 201	52	.	.	52	56.5	.	.	56.5	0	.	.	0	38	.	.	38	21	.	.	21	20MAY	.	.	20MAY
JS 222	51	30	.	41	54.6	52.3	.	53.4	0	31	.	16	40	35	.	37	43	100	.	71	20MAY	17MAY	.	19MAY
HUNTER	50	18	40	36	52.2	51.6	58.3	54.0	0	38	0	13	35	28	30	31	29	100	79	69	20MAY	10MAY	09MAY	13MAY
MASSEY	48	24	33	35	53.2	51.6	53.1	52.6	0	84	85	56	39	35	37	37	48	100	94	80	21MAY	10MAY	12MAY	14MAY
BH 202	47	.	.	47	50.0	.	.	50.0	0	.	.	0	38	.	.	38	20	.	.	20	19MAY	.	.	19MAY
BH 100	47	.	.	47	52.2	.	.	52.2	0	.	.	0	38	.	.	38	13	.	.	13	19MAY	.	.	19MAY
SULLIVAN	47	37	32	39	56.1	55.6	54.4	55.4	0	19	45	21	41	37	40	39	26	100	91	73	20MAY	12MAY	08MAY	14MAY
COKER 916	47	25	42	38	55.6	50.8	53.9	53.4	0	64	20	28	31	31	33	32	26	100	94	73	19MAY	11MAY	06MAY	12MAY
SALUDA	45	32	43	40	53.3	51.4	56.6	53.8	0	41	48	30	33	31	32	32	19	100	88	69	21MAY	15MAY	12MAY	16MAY
FELAND	44	32	49	42	54.7	51.8	55.3	53.9	0	46	13	20	35	36	38	36	13	100	86	66	23MAY	16MAY	12MAY	17MAY
DOUBLECROP	42	22	32	32	56.6	54.2	54.6	55.1	0	15	69	28	38	34	35	36	41	100	96	79	13MAY	09MAY	03MAY	09MAY
COKER 983	13	.	.	13	54.0	.	.	54.0	0	.	.	0	31	.	.	31	4	.	.	4	25MAY	.	.	25MAY

CV (1984) = 17%
LSD (1984) = 13 Bu/A

¹Location was Princeton, limestone soil.

Table 8A.—Wheat Performance Trials for Southern Tier Region, 1982-1984.¹

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				--- PLANT HEIGHT (IN) ---				-- PCT SURVIVAL --				HEADING DATE			
	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN
BH 203	73	.	.	73	59.7	.	.	59.7	0	.	.	0	40	.	.	40	56	.	.	56	18MAY	.	.	18MAY
TYLER	71	55	61	62	58.3	53.9	54.2	55.5	0	0	0	0	41	40	38	40	85	100	100	95	16MAY	13MAY	07MAY	12MAY
HART	63	35	57	52	59.1	53.8	54.4	55.8	0	0	0	0	36	35	38	36	79	100	100	93	14MAY	13MAY	05MAY	11MAY
BH 301	62	.	.	62	58.4	.	.	58.4	0	.	.	0	40	.	.	40	49	.	.	49	20MAY	.	.	20MAY
MASSEY	62	48	54	55	58.7	56.7	57.1	57.5	0	0	10	3	39	35	35	36	60	100	100	87	16MAY	09MAY	05MAY	10MAY
PIKE	60	38	45	47	58.2	53.2	54.7	55.4	0	0	3	1	37	33	34	35	64	100	100	88	16MAY	15MAY	07MAY	13MAY
S-76	59	38	61	52	59.4	56.2	54.9	56.8	0	0	0	0	37	33	36	35	81	100	100	94	14MAY	15MAY	06MAY	12MAY
BH 201	59	.	.	59	60.3	.	.	60.3	0	.	.	0	37	.	.	37	38	.	.	38	15MAY	.	.	15MAY
BH 310	58	.	.	58	58.4	.	.	58.4	0	.	.	0	38	.	.	38	64	.	.	64	18MAY	.	.	18MAY
BH 202	57	.	.	57	59.4	.	.	59.4	0	.	.	0	37	.	.	37	34	.	.	34	16MAY	.	.	16MAY
2550	56	40	57	51	58.7	53.4	53.3	55.1	0	0	3	1	34	33	34	34	69	100	100	90	14MAY	15MAY	05MAY	12MAY
SCOTTY	56	34	54	48	57.4	54.9	55.9	56.1	0	0	0	0	36	34	34	35	64	100	100	88	16MAY	14MAY	06MAY	12MAY
COKER 747	56	42	58	52	61.7	57.6	58.4	59.2	0	0	0	0	36	31	34	34	65	100	100	88	15MAY	13MAY	05MAY	11MAY
JS 222	55	40	.	47	58.9	55.2	.	57.0	0	0	.	0	38	35	.	37	56	100	.	78	16MAY	13MAY	.	15MAY
FILLMORE	54	45	57	52	59.3	57.2	56.2	57.6	0	0	0	0	40	37	40	39	60	100	100	87	19MAY	19MAY	11MAY	17MAY
MAGNUM	54	.	.	54	59.9	.	.	59.9	0	.	.	0	33	.	.	33	79	.	.	79	14MAY	.	.	14MAY
ARTHUR 71	54	35	37	42	60.7	57.4	53.9	57.3	0	0	15	5	38	34	36	36	70	100	100	90	15MAY	13MAY	05MAY	11MAY
COHPTON	53	.	.	53	60.6	.	.	60.6	0	.	.	0	37	.	.	37	70	.	.	70	15MAY	.	.	15MAY
WHEELER	53	43	59	52	57.9	56.1	56.4	56.8	0	0	0	0	39	33	38	36	43	100	100	81	17MAY	13MAY	07MAY	13MAY
SULLIVAN	53	38	44	45	60.3	58.2	57.2	58.6	0	0	10	3	38	34	38	37	60	100	100	87	14MAY	11MAY	04MAY	10MAY
AUBURN	52	43	51	49	59.3	57.0	56.8	57.7	0	0	0	0	39	35	39	38	70	100	100	90	19MAY	17MAY	12MAY	16MAY
SALUDA	51	45	56	51	58.3	54.8	58.8	57.3	0	0	4	1	34	32	31	32	39	100	100	80	18MAY	13MAY	06MAY	13MAY
MCHAIR 1003	51	37	48	45	56.7	51.5	53.4	53.9	0	0	0	0	37	33	35	35	29	100	100	76	18MAY	10MAY	05MAY	11MAY
FELAND	50	41	52	48	58.9	57.5	56.1	57.5	0	0	0	0	37	36	37	36	35	100	100	78	17MAY	13MAY	06MAY	12MAY
ABE	50	33	41	41	59.2	56.2	53.2	56.2	0	0	0	0	35	32	35	34	53	100	100	84	15MAY	12MAY	04MAY	11MAY
BEAU	50	32	43	42	60.6	53.2	59.1	57.6	0	0	0	0	36	33	36	35	63	100	100	88	15MAY	13MAY	09MAY	12MAY
ARTHUR	49	31	41	41	59.2	56.4	57.8	57.8	0	0	4	1	37	33	36	35	58	100	100	86	14MAY	12MAY	04MAY	10MAY
CALDWELL	49	39	54	47	56.7	54.4	54.9	55.3	0	0	0	0	36	34	32	34	49	100	100	83	15MAY	14MAY	04MAY	11MAY
HUNTER	47	40	38	42	57.7	58.3	59.0	58.3	0	0	0	0	34	27	27	29	34	100	100	78	16MAY	08MAY	03MAY	09MAY
BH 100	46	.	.	46	58.7	.	.	58.7	0	.	.	0	36	.	.	36	24	.	.	24	17MAY	.	.	17MAY
COKER 916	46	38	53	45	58.7	53.7	56.2	56.2	0	0	4	1	33	30	32	31	30	100	100	77	14MAY	09MAY	01MAY	08MAY
DOUBLECROP	42	34	42	40	59.8	56.6	57.5	58.0	0	0	5	2	33	32	32	32	65	100	100	88	11MAY	08MAY	28APR	06MAY
COKER 983	39	.	.	39	57.5	.	.	57.5	0	.	.	0	32	.	.	32	16	.	.	16	20MAY	.	.	20MAY

CV (1984) = 12%

LSD (1984) = 9 Bu/A

¹Location was Russellville.

Table 9.—Wheat Performance Trials for North Central Region, 1982-1984.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --			
	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN	1984	1983	1982	MEAN
TYLER	76	57	65	66	54.4	53.8	56.7	55.0	0	14	0	5	42	37	34	38	84	100	100	95
COKER 747	71	48	53	57	60.1	56.1	60.1	58.8	0	0	11	4	38	30	30	33	65	100	100	88
HART	70	43	50	54	59.9	55.4	58.6	58.0	0	4	0	1	42	36	35	38	68	100	100	89
S-76	69	50	49	56	59.1	56.3	58.3	57.9	0	0	0	0	40	35	33	36	71	100	100	90
ABE	68	40	49	52	60.2	56.6	59.0	58.6	0	9	0	3	41	33	34	36	63	100	100	88
MASSEY	68	59	63	63	57.6	57.1	57.9	57.5	0	1	0	0	40	35	34	36	39	100	100	80
CCMPTON	67	.	.	67	60.5	.	.	60.5	0	.	.	0	39	.	.	39	75	.	.	75
MAGNUM	66	.	.	66	58.7	.	.	58.7	0	.	.	0	36	.	.	36	73	.	.	73
2550	65	55	58	59	59.9	53.6	57.9	57.1	0	0	0	0	37	33	33	34	53	100	100	84
SULLIVAN	63	46	49	53	61.0	58.1	60.0	59.7	0	4	8	4	42	36	35	37	38	100	100	79
BEAU	63	42	40	48	59.4	56.7	58.9	58.3	0	3	3	2	41	34	33	36	59	100	100	86
SCOTTY	62	45	61	56	56.2	55.1	57.5	56.3	0	30	0	10	38	33	32	35	65	100	98	88
COKER 916	62	48	57	56	58.3	52.7	58.1	56.4	0	5	6	4	35	31	29	31	26	100	100	75
ARTHUR	60	37	48	48	60.4	56.1	59.7	58.7	0	5	14	6	41	33	34	36	53	100	98	83
PIKE	60	45	49	51	54.4	53.8	56.6	54.9	0	1	0	0	39	32	33	35	54	100	96	83
AUBURN	60	48	49	53	54.4	56.3	56.9	55.9	0	0	1	0	41	37	33	37	83	100	100	94
BH 203	60	.	.	60	56.2	.	.	56.2	0	.	.	0	43	.	.	43	45	.	.	45
FILLMORE	59	52	61	57	54.1	58.2	58.5	56.9	0	30	0	10	44	38	36	39	63	100	100	88
JS 222	59	47	.	53	58.6	56.6	.	57.6	0	5	.	3	42	35	.	38	39	100	.	69
BH 202	59	.	.	59	57.9	.	.	57.9	0	.	.	0	39	.	.	39	31	.	.	31
DOUBLECROP	57	43	45	48	62.4	56.9	59.9	59.7	0	40	5	15	38	34	32	35	74	100	100	91
BH 201	57	.	.	57	58.6	.	.	58.6	0	.	.	0	42	.	.	42	25	.	.	25
CALDWELL	56	42	61	53	56.0	52.6	56.9	55.2	0	8	6	5	37	32	32	34	39	100	100	80
ARTHUR 71	56	38	49	47	60.8	55.6	60.0	58.8	0	8	0	3	42	34	35	37	50	100	100	83
SALUDA	54	53	65	57	56.7	56.2	59.4	57.4	0	0	4	1	34	30	31	31	25	100	100	75
BH 301	54	.	.	54	56.6	.	.	56.6	0	.	.	0	44	.	.	44	44	.	.	44
MCHAIR 1003	52	42	56	50	54.0	52.0	55.1	53.7	0	4	0	1	39	32	35	35	25	100	99	75
WHEELER	52	52	56	53	58.8	57.2	58.2	58.1	0	4	30	11	44	36	37	39	26	100	100	75
HUNTER	51	54	53	53	59.2	59.3	61.2	59.9	0	3	0	1	36	30	26	31	19	100	91	70
BH 100	51	.	.	51	56.6	.	.	56.6	0	.	.	0	37	.	.	37	19	.	.	19
BH 310	50	.	.	50	55.1	.	.	55.1	0	.	.	0	39	.	.	39	39	.	.	39
FELAND	47	57	60	55	56.3	56.2	59.1	57.2	0	0	0	0	38	35	34	36	18	100	98	72
COKER 983	11	.	.	11	53.6	.	.	53.6	0	.	.	0	34	.	.	34	2	.	.	2

CV (1984) = 11%

LSD (1984) = 9 Bu/A

Table 10.—Disease Ratings of Wheat Varieties at Two Locations in 1984.

Variety	Lexington					Russellville			
	Leaf Blotch ¹	Powdery Mildew ¹	Leaf Rust ²	Stem Rust ³	Glume Blotch ⁴	Leaf Blotch ¹	Leaf Rust ²	Glume Blotch ⁴	Head Scab ⁵
*BH 203	7	6	0	-	2	5	1	1	3
Abe	7	8	5	+	1	8	1	1	7
Tyler	7	0	3	-	1	5	8	2	6
Compton	7	7	1	-	5	5	1	3	3
2550	8	7	1	-	2	8	1	1	11
Coker 747	6	6	3	+	1	6	1	1	10
*BH 301	7	0	1	-	2	5	0	1	7
S-76	8	8	7	+	2	7	4	1	5
Pike	7	5	1	-	2	6	1	1	10
Scotty	7	0	1	-	3	6	0	1	13
Massey	8	7	2	+	4	5	5	1	5
Auburn	7	5	1	-	2	6	1	1	16
*BH 201	7	8	1	-	1	6	3	0	3
Hart	7	8	15	-	2	6	11	1	6
Magnum	6	6	2	-	3	7	1	2	2
Wheeler	6	7	2	+	2	5	2	1	6
JS 222	6	7	2	-	2	6	2	1	7
Fillmore	7	6	1	-	2	5	1	1	16
*BH 202	7	5	1	-	2	7	1	0	0
*BH 310	8	7	2	-	3	5	1	1	5
Caldwell	8	7	2	-	3	7	0	2	5
Beau	7	8	8	-	2	7	1	2	1
Arthur	7	8	4	+	2	7	1	2	7
Arthur 71	7	7	4	+	1	6	2	2	4
Sullivan	7	7	4	+	1	5	2	1	5
Saluda	7	0	2	+	1	7	1	1	27
McNair 1003	6	6	5	+	2	5	4	2	5
Doublecrop	7	9	1	+	2	8	1	3	15
Feland	7	7	4	-	3	6	2	1	16
*BH 100	7	8	8	-	2	6	4	1	3
Coker 916	7	7	2	+	3	7	0	3	6
Hunter	6	0	4	+	2	6	2	2	10
Coker 983	6	0	3	+	2	5	1	1	5

*Hybrid Wheats

¹0-9 rating scale: 0 = no disease, 9 = severe disease

²% of flag leaf infected with rust pustules

³+ = presence of disease, - = absence of disease

⁴1-5 rating scale: 1 = lowest disease, 5 = most disease

⁵number of infected spikes per 40 ft² plot

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, 1981-1983.¹

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

¹Location was Princeton, limestone soil.

Table 14A.—Barley Performance Trials for Southern Tier Region, 1981-1983.¹

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

¹Location was Russellville.

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