

1989 Kentucky Small Grain Variety Trials

Progress Report 320



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1989 Kentucky Small Grain Variety Trials

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In 1989, Kentucky farmers harvested 25.5 million bushels of soft red winter wheat produced on 490,000 acres. The average yield of 52 bu/a was down slightly from 1988. Barley production was down 4% from 1988 levels.

Table 1.—Small Grain Harvested Acreage and Yields in Kentucky, 1987-1989.*

Crop	1989		1988		1987	
	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A
Wheat	490	52	380	54	330	49
Barley	17	61	14	77	11	67
Oats	8	45	8	50	7	52
Rye	3	NA	4	26	2	36

*July 1, 1989, Kentucky Crop and Livestock Reporting Service. Rye yields not available at press time.

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

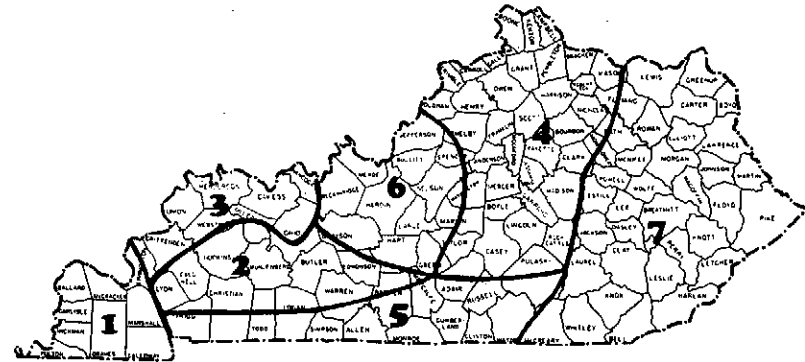


Figure 1.—Agro-climatic regions of Kentucky small grain variety trials.

Region	1989 Location	Cooperator	Crop Tested
1 Purchase	Bardwell	Roger Hobbs	Wheat
2 Western Coal Field	Princeton (Sandstone soil)	Research and Education Center	Barley, Wheat
3 Ohio Valley	Dixon	J.A. Tapp	Wheat
4 Bluegrass	Lexington	Kentucky Agricultural Experiment Station	Barley, Wheat
5 Southern Tier	Bowling Green Princeton (Limestone soil)	James Reynolds Research and Education Center	Barley, Wheat Barley, Wheat
6 North Central	Brandenburg	Jerry Hardesty	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, 1987-1989.

Region	Location	Preceding Crop	Crop	Planting Date			
				1989	1988	1987	
Purchase	Clinton	1987	Corn	Wheat	10/20	10/13	10/18
	Bardwell	1988	Corn				
		1989	Fallow				
Western Coal Field	Princeton (Sandstone soil)		Fallow	Barley	10/13	10/14	10/15
				Wheat	10/13	10/14	10/15
Ohio Valley	Calhoun	1987	Soybeans	Wheat	10/14	10/16	10/21
	Dixon	1988	Corn				
		1989	Tobacco				
Bluegrass	Lexington		Fallow	Barley	10/7	10/14	10/15
				Wheat	10/11	10/14	10/15
Southern Tier	Franklin	1987-88	Corn	Barley	10/19	10/12	10/9
	Bowling Green	1989	Corn	Wheat	10/19	10/12	10/9
	Princeton (Limestone soil)		Fallow	Barley	10/12	10/15	10/16
				Wheat	10/12	10/15	10/9
North Central	Campbellsville	1987	Soybeans	Wheat	10/17	10/19	10/22
	Brandenburg	1988-89	Corn				

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 inches from the ground to the tip of the upright grain head.

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.

1989 TEST CONDITIONS

Warm, dry weather in October allowed for timely planting of much of the small grains crop. Rainfall in November was well above normal for most of the state, hindering late planting of wheat

following soybean harvest. Temperatures during December were slightly above normal, and well above normal in January. In February, rainfall averaged 4 to 10 inches above normal over the state. There were some fields lost to standing water, and nitrogen deficits were evident in many small grain fields during this period.

The mild winter was believed to contribute to fairly heavy Hessian fly infestation that was evident at certain locations in the spring. Wet weather continued through the spring across much of the state, resulting in significant levels of powdery mildew, leaf rust, and glume blotch.

Harvest of barley and wheat was delayed by heavy rains, and considerable sprout damage was reported. Test weights were significantly reduced by sprout damage and weathering at the Southern Tier (Bowling Green) and Ohio Valley locations.

1988 TEST CONDITIONS

The fall of 1987 was characterized by very dry conditions and reduced soil moisture. Delayed germination resulted in spotty stands in some fields across the state.

Temperatures were mild through the late fall and much of the winter, and little winterkill was observed. Some damage from frost heaving in late February was reported in the central part of the state.

A warm, dry spring resulted in little fungal disease pressure, although considerable powdery mildew was observed in the Bluegrass region. Wheat spindle streak mosaic virus was once again in evidence, although yield losses from this disease were probably minimal. Another viral disease, wheat streak mosaic virus (WSMV), was observed in Kentucky in 1988. In certain instances, entire fields were devastated by this disease and had to be discarded.

The dry weather that persisted through the harvest period resulted in the highest yields and test weights on record.

1987 TEST CONDITIONS

Warm, dry weather in early October provided ideal planting conditions for much of the 1987 small grains crop. Rainfall in late

October and November, however, either delayed or prevented late planting of wheat after soybean harvest.

Mild temperatures prevailed through the fall, leading to excessive vegetative growth and a slight incidence of powdery mildew and leaf rust. Temperatures remained mild through much of the winter, and little winterkill was observed. Wheat spindle streak mosaic virus was more pronounced during this period than in previous years, possibly due to the mild conditions.

Warm spring weather resulted in early heading dates. Unusually hot, dry conditions during May shortened the grain filling period and hastened the maturity of wheat and barley. The lack of moisture reduced disease pressure significantly. In general, the onset of leaf rust and glume blotch occurred too late to reduce wheat yields substantially.

In spite of the extremely dry weather during grain fill, record wheat yields were observed in 1987.

SMALL GRAIN VARIETIES FOR 1990

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.

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.

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.

Table 3.—Characteristics of Wheat Varieties Tested in 1989.

VARIETY	PROTECTED*	SOURCE	RELEASE DATE	YIELD (BU/A)	TEST WEIGHT (LB/BU)	LODGING (%)	PLANT HEIGHT (IN.)	SURVIVAL (%)	HEADING DATE	SEED SIZE** (SEEDS/LB)
FFR 273	YES	SOUTHERN STATES COOP.	1989	78.7	54.0	10.4	37.5	99.3	05MAY89	10400
2550	YES	PIONEER HI BRED INT	1982	77.0	55.7	9.6	37.0	98.6	08MAY89	12800
PACER	YES	HYBRITECH	1987	76.2	55.9	20.7	36.6	96.8	06MAY89	14600
BECKER	YES	OHIO	1985	75.9	53.8	12.9	35.0	99.5	08MAY89	13100
2555	YES	PIONEER HI BRED INT	1987	75.6	53.5	12.5	35.8	99.5	05MAY89	11600
2548	YES	PIONEER HI BRED INT	1989	75.6	55.2	11.1	34.0	98.8	06MAY89	13400
CARDINAL	YES	OHIO	1986	75.5	53.4	6.3	40.6	98.8	09MAY89	11700
ADDER	YES	INDIANA	1985	73.9	53.7	9.1	35.1	99.3	07MAY89	14000
CLARK	YES	INDIANA	1988	73.5	54.4	14.3	36.6	99.1	02MAY89	12000
DYNASTY	YES	OHIO	1987	73.5	55.9	6.4	39.3	98.6	08MAY89	14400
FLA 302	YES	FLORIDA	1983	71.4	54.6	26.6	38.4	97.7	06MAY89	12400
HANCOCK	YES	NAPB	1988	71.4	55.1	27.1	36.0	98.4	08MAY89	12500
FFR 875	YES	SOUTHERN STATES COOP.	1989	70.3	55.8	18.4	37.2	99.3	06MAY89	12300
SALUDA	NO	VIRGINIA	1983	70.0	55.1	14.3	33.5	97.7	07MAY89	14000
TYLER	NO	VIRGINIA	1980	69.2	54.9	6.4	40.7	97.9	09MAY89	13000
WHEELER	NO	VIRGINIA	1980	68.3	56.3	27.7	40.4	98.9	08MAY89	11300
KEISER	YES	ARKANSAS	1987	67.1	54.0	37.5	41.8	99.8	05MAY89	13100
TWAIN	YES	NAPB	1986	67.1	56.2	25.7	37.3	98.8	03MAY89	14500
FFR 525	YES	SOUTHERN STATES COOP.	1989	67.0	55.1	38.6	36.8	97.5	05MAY89	12200
COKER 833	YES	NEW NORTHRUP KING	1984	66.0	54.4	47.5	37.9	99.5	09MAY89	13700
2551	YES	PIONEER HI BRED INT	1986	65.7	52.2	16.8	35.3	92.3	07MAY89	13100
SCOTTY	NO	ILLINOIS	1982	65.6	56.0	13.6	37.1	98.8	07MAY89	13500
LINCOLN	YES	NAPB	1986	65.1	54.6	24.8	38.3	98.6	06MAY89	14400
COMPTON	YES	INDIANA	1984	64.8	56.7	19.8	36.8	98.6	08MAY89	12300
CALDWELL	YES	INDIANA	1980	64.5	54.8	6.4	37.9	97.5	07MAY89	14700
COKER 9877	YES	NEW NORTHRUP KING	1986	64.2	54.1	31.8	37.9	96.3	10MAY89	15200
COKER 9733	YES	NEW NORTHRUP KING	1986	62.2	56.8	24.1	40.5	97.9	06MAY89	13600
COKER 9766	YES	NEW NORTHRUP KING	1987	62.2	54.0	29.3	35.2	95.9	08MAY89	14400
PIKE	YES	MISSOURI	1980	61.9	55.3	27.5	38.6	100.0	06MAY89	14700
COKER 9323	YES	NEW NORTHRUP KING	1986	61.8	54.9	18.9	34.6	97.0	06MAY89	14200
MASSEY	NO	VIRGINIA	1981	61.1	54.9	27.3	37.8	99.6	04MAY89	12800
COKER 916	YES	NEW NORTHRUP KING	1982	59.7	54.8	20.2	34.4	96.4	03MAY89	12500
ARTHUR	NO	INDIANA	1968	57.5	55.9	4.8	39.3	93.8	06MAY89	12200
DOUBLECROP	NO	ARKANSAS	1975	56.9	55.9	11.1	37.6	98.8	30APR89	12800

CV=12.6% THE CV IS A MEASURE OF EXPERIMENTAL ERROR. THE LOWER THE CV, THE MORE RELIABLE THE RESULTS.

LSD(0.05)=4.5 BU/A THE LSD (LEAST SIGNIFICANT DIFFERENCE) IS THE MINIMUM DIFFERENCE REQUIRED FOR TWO VARIETIES TO BE SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

* "UNAUTHORIZED PROPAGATION PROHIBITED." SEED OF THESE VARIETIES MUST BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED. INCLUDES VARIETIES FOR WHICH PROTECTION HAS BEEN APPLIED.

** VALUES REPRESENT THE AVERAGE SIZE OF SEED HARVESTED FROM THE LEXINGTON AND PRINCETON (LIMESTONE) PERFORMANCE TRIALS IN 1989.

Table 4.—Wheat Performance Trials for Purchase Region, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
CALDWELL	64	62	50	59	53.6	58.4	55.6	55.9	0	0	0	0	36	37	36	36	100	100	100	100	05MAY	05MAY	30APR	03MAY
CARDINAL	64	73	69	69	52.7	55.9	56.9	55.2	0	0	0	0	37	42	39	39	100	100	100	100	06MAY	08MAY	02MAY	06MAY
2555	63	92	.	78	54.1	59.8	.	56.9	0	0	.	0	34	41	.	37	100	100	.	100	03MAY	03MAY	.	02MAY
SALUDA	63	84	67	71	55.1	56.6	58.8	56.8	0	0	0	0	32	38	33	34	93	100	100	98	05MAY	08MAY	02MAY	05MAY
BECKER	63	84	70	72	54.3	57.8	55.6	55.9	0	0	0	0	32	37	35	35	100	100	100	100	06MAY	08MAY	02MAY	06MAY
DYNASTY	62	66	.	64	55.0	58.8	.	56.9	0	0	.	0	36	41	.	38	100	100	.	100	05MAY	07MAY	.	05MAY
FFR 525	62	.	.	62	55.1	.	.	55.1	0	.	.	0	35	.	.	35	100	.	.	100	02MAY	.	.	02MAY
ADDER	62	56	54	57	51.8	56.1	54.7	54.2	0	0	0	0	33	35	35	34	100	100	100	100	06MAY	05MAY	01MAY	04MAY
TYLER	61	72	64	66	55.1	56.4	57.5	56.3	0	0	0	0	38	41	39	39	98	100	100	99	06MAY	08MAY	02MAY	06MAY
HANCOCK	61	.	.	61	54.8	.	.	54.8	0	.	.	0	34	.	.	34	100	.	.	100	06MAY	.	.	06MAY
WHEELER	59	65	63	62	55.5	60.2	60.4	58.7	0	3	0	1	38	46	41	41	99	100	100	100	05MAY	07MAY	01MAY	05MAY
CLARK	58	65	.	61	54.6	58.7	.	56.6	0	0	.	0	34	40	.	37	100	100	.	100	01MAY	02MAY	.	01MAY
FFR 273	57	.	.	57	54.8	.	.	54.8	0	.	.	0	35	.	.	35	100	.	.	100	03MAY	.	.	03MAY
KEISER	56	87	.	71	54.1	59.4	.	56.7	0	0	.	0	40	46	.	43	100	100	.	100	04MAY	04MAY	.	03MAY
2550	54	67	65	62	55.8	59.2	56.7	57.2	0	0	0	0	34	38	36	36	100	100	100	100	06MAY	08MAY	02MAY	06MAY
PACER	54	77	.	66	55.8	60.1	.	57.9	0	0	.	0	34	37	.	35	85	100	.	93	05MAY	06MAY	.	05MAY
COMPTON	54	62	55	57	56.0	59.4	58.3	57.9	0	0	0	0	36	39	36	37	98	100	100	99	06MAY	08MAY	01MAY	05MAY
2548	54	.	.	54	54.2	.	.	54.2	0	.	.	0	31	.	.	31	98	.	.	98	04MAY	.	.	04MAY
PIKE	53	68	58	60	55.0	57.2	56.9	56.4	0	0	0	0	36	42	37	38	100	100	100	100	04MAY	07MAY	30APR	04MAY
TWAIN	53	79	70	67	57.6	60.7	58.8	59.0	0	0	0	0	35	43	39	39	100	100	100	100	01MAY	03MAY	27APR	30APR
COKER 833	51	76	.	64	53.8	56.7	.	55.2	0	6	.	3	36	41	.	38	100	100	.	100	06MAY	08MAY	.	07MAY
DOUBLECROP	50	60	49	53	56.4	61.2	60.1	59.2	0	0	0	0	35	41	39	38	100	100	100	100	28APR	29APR	21APR	26APR
FLA 302	50	85	64	66	54.4	57.3	55.7	55.8	0	0	0	0	36	41	38	38	95	100	100	98	05MAY	08MAY	03MAY	05MAY
SCOTTY	47	65	50	54	54.2	57.1	57.0	56.1	0	0	0	0	34	39	34	35	100	100	100	100	05MAY	06MAY	30APR	04MAY
MASSEY	46	69	73	63	55.3	56.9	58.8	57.0	0	0	0	0	35	41	39	38	100	100	100	100	03MAY	03MAY	01MAY	03MAY
COKER 916	45	70	65	60	54.3	59.0	56.1	56.5	0	3	0	1	33	37	34	34	83	100	100	94	02MAY	30APR	23APR	29APR
2551	45	61	67	58	52.1	56.4	55.3	54.6	0	0	0	0	33	38	34	35	60	100	100	87	04MAY	08MAY	02MAY	05MAY
FFR 875	44	.	.	44	54.7	.	.	54.7	0	.	.	0	32	.	.	32	100	.	.	100	05MAY	.	.	05MAY
COKER 9766	42	74	.	58	53.3	55.8	.	54.5	0	0	.	0	33	39	.	36	83	100	.	91	07MAY	06MAY	.	06MAY
COKER 9877	41	80	.	61	53.4	59.0	.	56.2	0	0	.	0	34	39	.	36	85	100	.	93	07MAY	06MAY	.	06MAY
LINCOLN	41	71	65	59	53.9	58.9	56.5	56.4	0	0	0	0	35	40	38	37	100	100	100	100	04MAY	07MAY	01MAY	04MAY
COKER 9733	39	82	.	61	56.0	60.3	.	58.1	0	0	.	0	39	44	.	41	86	100	.	93	05MAY	05MAY	.	04MAY
ARTHUR	38	55	47	47	55.8	59.5	56.9	57.4	0	0	0	0	34	42	37	38	83	100	100	94	04MAY	06MAY	28APR	03MAY
COKER 9323	34	63	.	49	51.6	55.9	.	53.7	0	0	.	0	31	36	.	34	86	100	.	93	06MAY	04MAY	.	04MAY
MEAN	53	71	61	61	54.5	58.2	57.2	56.3	0	0	0	0	35	40	37	37	95	100	100	98	04MAY	05MAY	30APR	03MAY

CV= 21.1%

LSD(0.05)= 15.4 BU/A

Table 5.—Wheat Performance Trials for Western Coal Field Region, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
FFR 273	91	.	.	91	54.8	.	.	54.8	6	.	.	6	38	.	.	38	100	.	.	100	05MAY	.	.	05MAY
PACER	88	67	.	77	55.5	60.2	.	57.8	39	0	.	19	37	36	.	37	100	100	.	100	04MAY	08MAY	.	06MAY
BECKER	85	66	70	73	53.2	58.4	55.4	55.7	0	0	0	0	36	33	36	35	100	100	100	100	08MAY	11MAY	07MAY	09MAY
2555	85	63	.	74	53.9	61.0	.	57.4	24	0	.	12	36	35	.	35	100	100	.	100	03MAY	08MAY	.	05MAY
FFR 875	83	.	.	83	56.4	.	.	56.4	11	.	.	11	38	.	.	38	100	.	.	100	05MAY	.	.	05MAY
ADDER	81	46	64	64	53.9	57.6	55.0	55.5	0	0	0	0	35	34	38	36	100	100	100	100	05MAY	10MAY	06MAY	07MAY
TYLER	81	69	72	74	54.5	59.6	58.4	57.5	0	0	0	0	42	39	41	41	100	100	100	100	08MAY	10MAY	06MAY	08MAY
CLARK	80	60	.	70	54.9	58.9	.	56.9	0	0	.	0	37	35	.	36	100	100	.	100	02MAY	05MAY	.	03MAY
2550	80	69	71	73	56.9	61.1	57.7	58.6	0	0	0	0	37	37	38	37	100	100	100	100	08MAY	10MAY	06MAY	09MAY
WHEELER	78	62	66	69	56.9	61.5	57.2	58.5	31	0	0	10	42	41	43	42	100	100	100	100	06MAY	08MAY	04MAY	07MAY
TWAIN	77	65	64	69	56.7	61.5	58.8	59.0	3	0	0	1	39	38	42	39	100	100	100	100	03MAY	05MAY	02MAY	04MAY
2548	77	.	.	77	55.7	.	.	55.7	0	.	.	0	35	.	.	35	100	.	.	100	06MAY	.	.	06MAY
FLA 302	77	70	69	72	54.6	59.6	51.9	55.4	23	0	0	8	39	39	38	39	100	100	100	100	05MAY	10MAY	06MAY	07MAY
SALUDA	76	62	67	68	55.5	62.4	58.5	58.8	0	0	0	0	34	34	34	34	99	100	100	100	05MAY	10MAY	05MAY	07MAY
SCOTTY	75	57	58	63	56.8	60.2	56.6	57.9	3	0	0	1	38	37	36	37	99	100	100	100	06MAY	09MAY	04MAY	07MAY
COMPTON	75	57	66	66	57.0	60.3	58.5	58.6	0	0	0	0	38	35	39	37	100	100	100	100	08MAY	09MAY	05MAY	08MAY
COKER 9877	74	72	.	73	55.4	59.4	.	57.4	30	0	.	15	39	37	.	38	99	99	.	99	09MAY	09MAY	.	09MAY
DYNASTY	74	58	.	66	55.8	60.1	.	57.9	0	0	.	0	39	37	.	38	100	100	.	100	09MAY	10MAY	.	09MAY
COKER 833	73	69	.	71	54.9	59.6	.	57.2	53	0	.	26	39	38	.	38	100	100	.	100	07MAY	10MAY	.	08MAY
CARDINAL	73	59	73	68	56.7	59.5	57.3	57.8	0	0	0	0	40	39	41	40	99	100	100	100	11MAY	11MAY	05MAY	09MAY
HANCOCK	72	.	.	72	55.8	.	.	55.8	0	.	.	0	36	.	.	36	99	.	.	99	09MAY	.	.	09MAY
COKER 9766	72	67	.	69	54.6	58.4	.	56.5	51	0	.	26	36	36	.	36	100	100	.	100	07MAY	10MAY	.	08MAY
CALDWELL	71	59	57	63	55.2	61.0	56.1	57.4	8	0	0	3	37	37	37	37	95	100	100	98	07MAY	08MAY	04MAY	07MAY
PIKE	71	68	56	65	55.1	60.9	57.0	57.7	5	0	0	2	39	39	40	39	100	100	100	100	06MAY	09MAY	05MAY	07MAY
COKER 9323	71	61	.	66	56.3	58.6	.	57.4	4	0	.	2	36	34	.	35	99	100	.	99	05MAY	06MAY	.	05MAY
DOUBLECROP	70	58	62	63	58.0	62.8	60.7	60.5	0	0	0	0	38	40	42	40	100	100	100	100	30APR	30APR	28APR	29APR
KEISER	70	53	.	62	52.2	60.7	.	56.4	86	0	.	43	42	43	.	43	100	100	.	100	03MAY	08MAY	.	05MAY
FFR 525	69	.	.	69	55.4	.	.	55.4	60	.	.	60	38	.	.	38	95	.	.	95	04MAY	.	.	04MAY
COKER 9733	68	65	.	66	57.9	61.4	.	59.6	46	0	.	23	41	41	.	41	100	100	.	100	05MAY	07MAY	.	05MAY
COKER 916	68	67	63	66	55.7	60.0	57.1	57.6	28	0	0	9	35	33	36	35	98	100	100	99	03MAY	03MAY	30APR	02MAY
LINCOLN	68	66	71	68	55.8	60.1	57.1	57.7	19	0	0	6	39	38	40	39	98	100	100	99	06MAY	08MAY	05MAY	06MAY
MASSEY	67	63	74	68	54.6	60.7	55.5	56.9	44	0	0	15	39	37	40	39	100	100	100	100	03MAY	07MAY	05MAY	05MAY
2551	66	52	64	61	55.2	59.9	55.5	56.9	3	0	0	1	34	36	35	35	95	100	100	98	08MAY	10MAY	06MAY	08MAY
ARTHUR	61	49	62	57	57.1	61.5	58.5	59.0	0	0	0	0	40	39	42	40	88	100	100	96	05MAY	09MAY	02MAY	05MAY
MEAN		62	66	69	55.6	60.2	57.0	57.4	17	0	0	9	38	37	39	38	99	100	100	99	06MAY	08MAY	04MAY	06MAY

CV= 9.4%
LSD(0.05)= 9.8 BU/A

Table 6.—Wheat Performance Trials for Ohio Valley Region, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
2548	86	.	.	86	52.8	.	.	52.8	55	.	.	55	39	.	.	39	100	.	.	100	09MAY	.	.	09MAY
FFR 273	80	.	.	80	50.9	.	.	50.9	36	.	.	36	42	.	.	42	100	.	.	100	08MAY	.	.	08MAY
CLARK	79	83	.	81	51.7	59.5	.	55.6	68	0	.	34	42	40	.	41	100	100	.	100	02MAY	05MAY	.	03MAY
FFR 525	77	.	.	77	53.4	.	.	53.4	59	.	.	59	42	.	.	42	100	.	.	100	08MAY	.	.	08MAY
PACER	77	96	.	87	54.3	61.9	.	58.1	60	0	.	30	42	40	.	41	100	100	.	100	07MAY	08MAY	.	07MAY
FLA 302	77	95	51	74	51.1	61.2	55.1	55.8	71	0	0	24	43	40	34	39	100	100	100	100	09MAY	07MAY	08MAY	08MAY
2550	76	85	52	71	53.8	62.3	55.3	57.1	20	0	0	7	41	39	32	37	100	100	100	100	09MAY	09MAY	09MAY	09MAY
WHEELER	76	83	44	68	55.5	63.4	56.6	58.5	48	5	0	18	44	43	38	42	100	100	100	100	11MAY	07MAY	07MAY	08MAY
FFR 875	75	.	.	75	52.9	.	.	52.9	43	.	.	43	42	.	.	42	100	.	.	100	09MAY	.	.	09MAY
TWAIN	75	96	47	73	53.9	63.0	56.6	57.8	49	0	0	16	42	42	35	40	100	100	100	100	04MAY	05MAY	04MAY	05MAY
COKER 9323	74	90	.	82	53.3	60.3	.	56.8	41	0	.	21	40	38	.	39	100	100	.	100	09MAY	05MAY	.	06MAY
SALUDA	73	98	52	74	52.4	63.9	54.4	56.9	65	0	0	22	39	38	30	35	100	100	100	100	11MAY	08MAY	08MAY	09MAY
SCOTTY	72	88	49	70	55.2	61.2	55.7	57.4	45	0	0	15	42	40	34	39	100	100	100	100	10MAY	08MAY	07MAY	09MAY
DOUBLECROP	71	64	49	61	53.8	63.2	56.5	57.8	34	0	0	11	44	42	37	41	100	100	100	100	30APR	29APR	29APR	30APR
2555	71	90	.	81	50.7	62.1	.	56.4	15	0	.	8	41	39	.	40	100	100	.	100	07MAY	08MAY	.	07MAY
HANCOCK	71	.	.	71	54.5	.	.	54.5	60	.	.	60	41	.	.	41	100	.	.	100	10MAY	.	.	10MAY
COKER 833	71	96	.	83	52.4	61.0	.	56.7	76	0	.	38	43	43	.	43	100	100	.	100	11MAY	08MAY	.	09MAY
COKER 9877	70	106	.	88	51.4	61.3	.	56.3	45	0	.	23	43	43	.	43	100	100	.	100	12MAY	07MAY	.	09MAY
CARDINAL	70	94	44	69	51.3	60.8	57.0	56.4	40	0	0	13	45	44	35	41	100	100	100	100	11MAY	09MAY	09MAY	10MAY
ADDER	69	74	42	62	52.2	59.0	52.5	54.6	36	0	0	12	39	37	32	36	100	100	100	100	11MAY	08MAY	08MAY	09MAY
DYNASTY	69	69	.	69	54.8	62.3	.	58.5	28	0	.	14	44	40	.	42	100	100	.	100	08MAY	09MAY	.	08MAY
2551	68	86	50	68	49.0	60.5	54.7	54.7	48	0	0	16	39	39	31	36	100	100	100	100	10MAY	08MAY	07MAY	08MAY
COKER 9733	67	92	.	80	56.3	63.0	.	59.6	45	0	.	23	47	46	.	46	100	100	.	100	08MAY	06MAY	.	06MAY
BECKER	67	99	49	72	49.2	60.4	53.9	54.5	28	0	0	9	41	37	30	36	100	100	100	100	11MAY	11MAY	10MAY	11MAY
COKER 916	65	91	46	67	52.4	61.7	54.7	56.3	54	0	0	18	40	39	30	36	100	100	100	100	04MAY	02MAY	03MAY	03MAY
KEISER	65	90	.	77	52.9	62.0	.	57.4	36	0	.	18	46	48	.	47	100	100	.	100	07MAY	07MAY	.	06MAY
COMPTON	64	88	43	65	55.3	62.6	56.7	58.2	74	0	0	25	41	38	32	37	100	100	100	100	11MAY	08MAY	08MAY	09MAY
COKER 9766	63	81	.	72	50.5	61.3	.	55.9	33	3	.	18	41	40	.	40	100	100	.	100	11MAY	08MAY	.	09MAY
PIKE	62	82	45	63	54.7	61.2	55.5	57.1	58	0	0	19	44	42	36	41	100	100	100	100	08MAY	06MAY	07MAY	07MAY
TYLER	59	94	45	66	52.2	61.1	55.6	56.3	20	0	0	7	45	43	36	41	100	100	100	100	11MAY	08MAY	08MAY	10MAY
ARTHUR	58	67	42	56	55.0	62.4	56.2	57.9	8	0	0	3	45	42	38	41	100	100	100	100	08MAY	06MAY	06MAY	07MAY
CALDWELL	57	84	50	64	53.8	62.4	54.6	56.9	25	0	0	8	42	40	33	38	100	100	100	100	11MAY	08MAY	06MAY	08MAY
MASSEY	56	91	47	65	51.9	61.3	56.5	56.6	75	0	0	25	42	42	35	40	100	100	100	100	07MAY	05MAY	08MAY	07MAY
LINCOLN	54	79	45	59	52.7	61.0	55.9	56.5	33	0	0	11	42	39	33	38	100	100	100	100	09MAY	08MAY	07MAY	08MAY
MEAN	70	87	47	72	52.9	61.6	55.5	56.3	45	0	0	22	42	41	34	40	100	100	100	100	08MAY	07MAY	07MAY	07MAY

CV= 12.4%

LSD(0.05)= 12.1 BU/A

Table 7.—Wheat Performance Trials for Bluegrass Region, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
2550	84	66	70	73	56.8	59.4	53.7	56.6	0	0	33	11	40	33	40	38	90	93	95	93	17MAY	16MAY	13MAY	15MAY
2548	84	.	.	84	56.9	.	.	56.9	0	.	.	0	36	.	.	36	94	.	.	94	15MAY	.	.	15MAY
FFR 273	83	.	.	83	56.5	.	.	56.5	10	.	.	10	41	.	.	41	95	.	.	95	13MAY	.	.	13MAY
LINCOLN	82	68	56	69	56.4	59.4	50.8	55.5	6	0	88	31	41	33	40	38	93	86	96	92	13MAY	14MAY	12MAY	13MAY
PACER	81	59	.	70	57.9	59.5	.	58.7	5	0	.	3	39	32	.	35	93	93	.	93	15MAY	15MAY	.	14MAY
ADDER	76	53	55	61	57.0	55.4	50.8	54.4	0	0	68	23	36	31	39	36	95	84	96	92	16MAY	15MAY	14MAY	15MAY
SALUDA	76	69	77	74	57.0	63.7	52.7	57.8	1	0	85	29	36	32	38	36	93	89	96	93	14MAY	14MAY	11MAY	14MAY
FLA 302	75	63	69	69	55.8	56.8	48.0	53.5	9	0	63	24	42	35	43	40	98	90	95	94	15MAY	15MAY	12MAY	14MAY
2551	75	59	57	63	54.5	58.1	50.5	54.4	0	0	59	20	38	34	39	37	91	93	99	94	17MAY	15MAY	13MAY	15MAY
BECKER	74	62	41	59	56.4	56.5	49.2	54.0	0	0	4	1	36	28	33	32	96	88	95	93	17MAY	16MAY	15MAY	16MAY
HANCOCK	73	.	.	73	58.1	.	.	58.1	8	.	.	8	38	.	.	38	90	.	.	90	16MAY	.	.	16MAY
DYNASTY	73	59	.	66	56.9	61.4	.	59.1	0	0	.	0	41	35	.	38	90	89	.	89	18MAY	15MAY	.	16MAY
CARDINAL	72	66	61	67	57.6	59.5	52.8	56.6	0	0	35	12	42	35	43	40	93	88	94	91	18MAY	15MAY	14MAY	16MAY
COKER 9733	71	57	.	64	58.4	62.0	.	60.2	6	0	.	3	42	35	.	38	99	93	.	96	15MAY	14MAY	.	14MAY
SCOTTY	71	64	59	65	57.0	59.7	54.5	57.1	0	0	30	10	39	32	40	37	93	94	93	93	17MAY	15MAY	14MAY	16MAY
CLARK	71	66	.	68	56.0	60.2	.	58.1	0	0	.	0	38	33	.	35	94	95	.	94	10MAY	11MAY	.	10MAY
FFR 875	68	.	.	68	57.3	.	.	57.3	3	.	.	3	39	.	.	39	95	.	.	95	16MAY	.	.	16MAY
COKER 9766	67	59	.	63	54.9	57.6	.	56.2	33	0	.	16	37	32	.	35	89	88	.	88	19MAY	16MAY	.	17MAY
2555	66	63	.	64	54.9	60.8	.	57.8	0	0	.	0	37	32	.	35	96	90	.	93	15MAY	12MAY	.	13MAY
TYLER	66	61	69	65	56.7	59.6	52.5	56.3	0	0	18	6	43	34	44	40	88	90	94	90	18MAY	15MAY	14MAY	16MAY
PIKE	66	70	55	63	56.9	60.8	54.3	57.3	29	0	25	18	41	36	45	41	100	91	96	96	15MAY	13MAY	12MAY	13MAY
FFR 525	66	.	.	66	56.8	.	.	56.8	3	.	.	3	39	.	.	39	88	.	.	88	14MAY	.	.	14MAY
TWAIN	65	69	70	68	57.8	61.6	56.4	58.6	26	0	63	30	38	36	45	40	91	94	95	93	11MAY	12MAY	10MAY	11MAY
ARTHUR	65	50	61	59	58.1	62.1	52.0	57.4	0	0	35	12	44	36	47	42	86	84	96	89	14MAY	13MAY	12MAY	13MAY
COMPTON	64	58	59	61	57.8	62.0	55.1	58.3	0	0	68	23	38	31	39	36	93	91	99	94	18MAY	15MAY	14MAY	16MAY
CALDWELL	64	56	49	57	57.3	59.8	50.0	55.7	0	0	59	20	40	33	39	37	88	83	94	88	16MAY	14MAY	11MAY	14MAY
KEISER	64	68	.	66	55.0	59.8	.	57.4	48	0	.	24	43	37	.	40	99	86	.	93	15MAY	14MAY	.	14MAY
MASSEY	64	59	64	62	56.9	60.8	56.2	58.0	35	0	53	29	40	35	45	40	98	89	99	95	14MAY	14MAY	12MAY	14MAY
COKER 9877	63	60	.	61	53.6	57.9	.	55.7	21	0	.	11	39	34	.	36	100	86	.	93	21MAY	18MAY	.	19MAY
COKER 9323	62	60	.	61	56.2	58.9	.	57.5	25	0	.	13	37	31	.	34	96	91	.	94	15MAY	13MAY	.	13MAY
COKER 833	58	62	.	60	56.4	57.2	.	56.8	48	0	.	24	38	33	.	36	96	95	.	96	19MAY	16MAY	.	17MAY
WHEELER	55	61	62	59	59.0	62.3	56.3	59.2	34	0	53	29	42	37	47	42	94	91	100	95	19MAY	15MAY	13MAY	16MAY
COKER 916	52	60	66	59	55.8	59.2	50.9	55.3	4	0	59	21	34	31	40	35	95	90	95	93	10MAY	11MAY	09MAY	10MAY
DOUBLECROP	35	54	55	48	57.0	63.7	58.5	59.7	0	0	16	5	39	35	46	40	91	95	95	94	08MAY	10MAY	08MAY	09MAY
MEAN	69	61	61	65	56.7	59.9	52.9	57.0	10	0	48	14	39	34	42	38	93	90	96	93	15MAY	14MAY	12MAY	14MAY

CV = 8.9%
LSD(0.05) = 8.6 BU/A

Table 8.—Wheat Performance Trials for Southern Tier Region*, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
CLARK	93	97	.	95	57.2	59.6	.	58.4	25	0	.	13	37	41	.	39	100	100	.	100	30APR	04MAY	.	01MAY
BECKER	92	90	85	89	55.4	56.9	54.2	55.5	46	0	0	15	34	38	34	35	100	100	100	100	04MAY	09MAY	05MAY	06MAY
CARDINAL	91	84	87	87	57.3	57.1	55.7	56.7	0	0	0	0	41	43	41	42	100	100	100	100	04MAY	11MAY	04MAY	07MAY
2550	87	91	79	86	57.9	58.6	53.7	56.7	39	3	5	15	37	40	37	38	100	93	100	98	04MAY	09MAY	05MAY	06MAY
FACER	86	81	.	83	57.2	56.1	.	56.6	21	9	.	15	36	40	.	38	100	93	.	96	03MAY	07MAY	.	04MAY
DYNASTY	85	78	.	82	58.0	56.9	.	57.4	15	0	.	8	40	43	.	42	100	93	.	96	04MAY	08MAY	.	06MAY
2555	85	107	.	96	56.8	60.0	.	58.4	44	0	.	22	36	41	.	38	100	85	.	93	02MAY	04MAY	.	02MAY
ADDER	83	70	68	74	56.3	54.7	52.0	54.3	28	0	0	9	36	38	37	37	100	100	100	100	03MAY	09MAY	03MAY	05MAY
2551	83	94	76	84	55.1	57.1	51.5	54.6	46	0	0	15	36	40	34	37	100	100	100	100	03MAY	07MAY	05MAY	05MAY
HANCOCK	81	.	.	81	56.7	.	.	56.7	80	.	.	80	34	.	.	34	100	.	.	100	04MAY	.	.	04MAY
WHEELER	81	68	77	75	58.4	59.1	58.1	58.5	50	43	15	36	40	44	44	42	100	93	100	98	04MAY	08MAY	04MAY	05MAY
2548	81	.	.	81	57.8	.	.	57.8	20	.	.	20	32	.	.	32	100	.	.	100	03MAY	.	.	03MAY
TYLER	77	87	74	79	56.7	55.7	55.2	55.9	25	1	3	10	40	45	40	42	100	85	100	95	05MAY	09MAY	04MAY	06MAY
SCOTTY	75	80	75	77	58.0	56.8	57.0	57.3	45	4	4	18	37	41	37	38	100	100	100	100	03MAY	07MAY	04MAY	05MAY
FLA 302	75	94	79	82	56.1	57.3	55.6	56.3	46	4	8	19	37	41	39	39	91	100	100	97	04MAY	08MAY	05MAY	06MAY
FFR 273	75	.	.	75	56.1	.	.	56.1	20	.	.	20	37	.	.	37	100	.	.	100	03MAY	.	.	03MAY
COMPTON	74	76	73	75	59.1	59.1	57.7	58.6	38	3	11	17	37	39	37	38	100	100	100	100	04MAY	09MAY	05MAY	06MAY
FFR 875	74	.	.	74	57.7	.	.	57.7	68	.	.	68	37	.	.	37	100	.	.	100	02MAY	.	.	02MAY
LINCOLN	74	71	79	75	56.6	57.5	56.5	56.9	61	16	3	27	39	41	38	39	100	93	100	98	03MAY	08MAY	03MAY	05MAY
KHISER	74	66	.	70	56.0	55.8	.	55.9	65	61	.	63	39	44	.	41	100	100	.	100	30APR	06MAY	.	03MAY
SALUDA	71	89	73	78	57.5	60.2	57.3	58.3	31	1	0	11	33	38	34	35	100	85	100	95	04MAY	08MAY	03MAY	05MAY
CALDWELL	71	83	76	77	56.1	58.4	53.4	56.0	13	1	0	5	38	41	37	39	100	100	100	100	04MAY	08MAY	02MAY	05MAY
COKER 9323	71	90	.	80	56.9	58.5	.	57.7	40	0	.	20	35	37	.	36	98	100	.	99	02MAY	07MAY	.	04MAY
COKER 916	69	92	72	78	55.9	58.9	55.5	56.8	54	3	44	33	33	37	35	35	100	93	100	98	30APR	02MAY	29APR	30APR
COKER 833	69	76	.	73	56.2	55.9	.	56.0	66	8	.	37	37	40	.	38	100	100	.	100	05MAY	09MAY	.	07MAY
COKER 9766	68	67	.	68	56.4	53.1	.	54.7	61	58	.	59	35	38	.	36	100	100	.	100	03MAY	08MAY	.	05MAY
MASSEY	68	83	80	77	56.9	57.9	56.3	57.0	28	24	25	25	36	42	39	39	100	93	100	98	30APR	06MAY	03MAY	03MAY
ARTHUR	67	68	70	68	59.0	60.0	57.4	58.8	10	10	0	7	39	45	42	42	100	93	100	98	02MAY	07MAY	02MAY	04MAY
FFR 525	66	.	.	66	56.8	.	.	56.8	93	.	.	93	35	.	.	35	100	.	.	100	02MAY	.	.	02MAY
COKER 9733	65	89	.	77	58.7	56.2	.	57.4	25	16	.	21	38	44	.	41	100	93	.	96	02MAY	06MAY	.	03MAY
TWAIN	62	80	80	74	58.4	62.2	57.2	59.3	58	28	6	30	37	44	40	40	100	100	100	100	30APR	05MAY	30APR	02MAY
COKER 9877	60	84	.	72	56.6	54.1	.	55.3	61	11	.	36	37	39	.	38	90	93	.	91	09MAY	10MAY	.	09MAY
DOUBLECROP	60	72	72	68	58.1	61.6	59.5	59.7	21	10	0	10	36	43	41	40	100	100	100	100	27APR	29APR	27APR	28APR
PIKE	56	78	68	67	56.0	56.8	52.7	55.2	64	23	3	30	38	43	39	40	100	93	100	98	03MAY	08MAY	01MAY	04MAY
MEAN	75	82	76	78	57.1	57.7	55.6	56.9	41	12	7	27	37	41	38	38	99	96	100	98	03MAY	07MAY	03MAY	04MAY

CV= 15.7%

LSD(0.05)= 16.5 BU/A

*Location was Princeton, limestone soil.

Table 8A.—Wheat Performance Trials for Southern Tier Region*, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
FLA 302	83	104	86	91	56.1	60.2	52.8	56.4	0	0	50	17	34	41	43	39	100	90	100	97	02MAY	30APR	01MAY	01MAY
CARDINAL	83	109	62	84	44.8	59.8	52.0	52.2	0	0	48	16	39	44	44	42	100	100	100	100	04MAY	06MAY	03MAY	04MAY
2550	82	103	62	82	54.7	61.6	53.0	56.4	0	0	44	15	33	40	40	38	100	100	100	100	05MAY	06MAY	03MAY	05MAY
FFR 273	82	.	.	82	51.4	.	.	51.4	0	.	.	0	32	.	.	32	100	.	.	100	01MAY	.	.	01MAY
COKER 833	79	99	.	89	53.1	60.8	.	56.9	0	0	.	0	33	42	.	38	100	100	.	100	05MAY	02MAY	.	03MAY
DYNASTY	78	95	.	87	56.0	60.8	.	58.4	0	0	.	0	36	41	.	38	100	100	.	100	03MAY	05MAY	.	03MAY
ADDER	77	96	69	81	51.4	59.7	44.3	51.8	0	0	58	19	32	40	41	37	100	100	100	100	03MAY	03MAY	03MAY	03MAY
KEISER	77	94	.	86	53.2	59.7	.	56.4	0	0	.	0	38	46	.	42	100	100	.	100	29APR	30APR	.	29APR
COKER 9877	77	93	.	85	51.1	59.8	.	55.4	0	0	.	0	35	41	.	38	100	89	.	94	05MAY	03MAY	.	03MAY
2555	77	107	.	92	52.0	61.1	.	56.5	0	0	.	0	32	41	.	37	100	100	.	100	30APR	30APR	.	29APR
FACER	75	99	.	87	55.2	60.9	.	58.0	0	0	.	0	32	41	.	37	100	100	.	100	03MAY	02MAY	.	02MAY
2548	75	.	.	75	55.4	.	.	55.4	0	.	.	0	30	.	.	30	100	.	.	100	02MAY	.	.	02MAY
BECKER	74	104	62	80	53.7	59.8	51.0	54.8	0	0	10	3	31	37	40	36	100	100	100	100	03MAY	05MAY	04MAY	04MAY
FFR 875	73	.	.	73	55.6	.	.	55.6	0	.	.	0	33	.	.	33	100	.	.	100	30APR	.	.	30APR
TYLER	72	99	65	79	55.1	60.3	47.7	54.4	0	0	20	7	37	45	45	42	100	100	100	100	04MAY	05MAY	03MAY	04MAY
WHEELER	71	95	61	76	53.8	61.6	52.6	56.0	0	0	51	17	36	47	44	42	100	100	100	100	03MAY	02MAY	02MAY	03MAY
HANCOCK	70	.	.	70	51.5	.	.	51.5	0	.	.	0	32	.	.	32	100	.	.	100	03MAY	.	.	03MAY
TWAIN	70	100	56	76	53.9	62.5	50.6	55.7	0	0	23	8	33	43	43	40	100	100	100	100	28APR	28APR	29APR	29APR
LINCOLN	68	100	51	73	53.0	60.7	52.0	55.2	0	0	39	13	34	43	43	40	100	100	100	100	01MAY	04MAY	02MAY	03MAY
SALUDA	67	108	73	83	53.4	63.3	47.2	54.6	0	0	80	27	29	40	40	36	100	100	100	100	02MAY	01MAY	01MAY	02MAY
COKER 9733	66	85	.	75	53.9	61.7	.	57.8	0	0	.	0	36	45	.	40	100	89	.	94	30APR	28APR	.	28APR
COMPTON	66	87	59	71	56.5	62.3	47.7	55.5	0	0	51	17	31	41	40	37	100	100	100	100	03MAY	04MAY	03MAY	03MAY
MASSEY	62	96	76	78	53.7	61.5	49.1	54.8	0	0	35	12	33	43	40	39	100	100	100	100	28APR	30APR	30APR	30APR
CALDWELL	62	99	68	76	54.0	61.2	48.5	54.6	0	0	28	9	33	41	43	39	100	100	100	100	03MAY	04MAY	02MAY	03MAY
COKER 9323	61	95	.	78	55.0	60.4	.	57.7	0	0	.	0	30	40	.	35	100	93	.	96	02MAY	26APR	.	28APR
2551	60	94	71	75	47.9	58.4	51.3	52.5	0	0	3	1	31	40	40	37	100	100	100	100	01MAY	03MAY	02MAY	02MAY
FFR 525	59	.	.	59	54.1	.	.	54.1	0	.	.	0	33	.	.	33	100	.	.	100	29APR	.	.	29APR
PIKE	58	105	66	76	54.6	61.3	52.9	56.3	0	0	66	22	33	46	43	40	100	100	100	100	01MAY	29APR	30APR	30APR
COKER 9766	58	99	.	78	55.5	59.4	.	57.4	0	0	.	0	30	42	.	36	100	100	.	100	02MAY	29APR	.	30APR
CLARK	57	95	.	76	52.2	60.0	.	56.1	0	0	.	0	30	40	.	35	100	100	.	100	28APR	28APR	.	27APR
DOUBLECROP	57	64	59	60	52.9	62.6	58.6	58.0	0	0	50	17	32	43	42	39	100	100	100	100	26APR	24APR	24APR	25APR
COKER 916	55	95	60	70	55.1	61.2	51.1	55.8	0	0	93	31	29	40	41	36	100	100	100	100	28APR	25APR	27APR	27APR
SCOTTY	53	103	66	74	55.8	60.6	50.4	55.6	0	0	35	12	31	42	41	38	100	100	100	100	03MAY	02MAY	03MAY	03MAY
ARTHUR	51	87	60	66	52.4	61.2	51.6	55.0	0	0	31	10	33	46	42	40	100	100	100	100	01MAY	02MAY	01MAY	02MAY
MEAN	69	97	65	78	53.5	60.8	50.8	55.0	0	0	43	8	33	42	42	37	100	99	100	99	01MAY	01MAY	01MAY	01MAY

CV= 10.4%

LSD(0.05)= 10.0 BU/A

*Location was Bowling Green.

Table 9.—Wheat Performance Trials for North Central Region, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
FFR 273	83	.	.	83	53.5	.	.	53.5	0	.	.	0	38	.	.	38	100	.	.	100
2555	81	85	.	83	52.1	60.4	.	56.2	5	0	.	3	36	35	.	35	100	100	.	100
CLARK	77	74	.	75	54.5	60.4	.	57.4	8	0	.	4	39	35	.	37	100	100	.	100
CARDINAL	76	71	57	68	53.3	58.3	55.9	55.8	4	0	0	1	41	35	36	37	100	100	100	100
BECKER	76	76	63	71	54.7	58.2	52.9	55.3	16	0	0	5	36	31	31	32	100	100	100	100
2550	75	71	59	68	54.0	60.5	54.5	56.3	9	0	0	3	38	32	34	34	100	100	100	100
FFR 875	74	.	.	74	55.9	.	.	55.9	5	.	.	5	40	.	.	40	100	.	.	100
DYNASTY	74	69	.	72	55.1	60.5	.	57.8	3	0	.	1	40	34	.	37	100	100	.	100
2548	73	.	.	73	53.8	.	.	53.8	3	.	.	3	35	.	.	35	100	.	.	100
PACER	73	82	.	77	55.1	60.1	.	57.6	20	0	.	10	37	35	.	36	100	100	.	100
HANCOCK	70	.	.	70	54.5	.	.	54.5	43	.	.	43	37	.	.	37	100	.	.	100
FFR 525	69	.	.	69	54.3	.	.	54.3	56	.	.	56	36	.	.	36	100	.	.	100
LINCOLN	69	64	63	65	53.7	60.3	57.5	57.2	55	0	0	18	40	34	38	37	100	100	100	100
ADDER	68	59	50	59	53.1	56.2	54.3	54.5	0	0	0	0	35	32	34	34	100	100	100	100
TYLER	68	69	53	63	54.0	60.2	54.3	56.2	0	0	0	0	41	34	36	37	100	100	100	100
PIKE	67	64	40	57	54.7	60.2	52.5	55.8	38	0	0	13	40	33	35	36	100	100	100	100
TWAIN	67	77	63	69	55.0	62.7	57.3	58.3	45	0	0	15	38	35	37	37	100	100	100	100
SCOTTY	67	55	53	58	54.9	58.9	57.0	56.9	3	0	0	1	39	31	35	35	100	100	100	100
MASSEY	66	70	60	65	55.3	59.9	56.1	57.1	10	0	0	3	40	36	37	38	100	100	100	100
FLA 302	65	55	57	59	53.9	58.2	55.9	56.0	38	0	0	13	39	31	36	35	100	100	100	100
COKER 9766	65	68	.	66	52.9	58.4	.	55.6	28	0	.	14	35	34	.	35	100	100	.	100
KEISER	65	69	.	67	54.3	60.5	.	57.4	28	0	.	14	44	39	.	42	100	100	.	100
2551	65	63	56	61	51.6	57.0	53.7	54.1	21	0	0	7	36	30	31	33	100	100	100	100
SALUDA	64	58	52	58	54.5	61.6	56.7	57.6	3	0	0	1	33	29	32	31	100	100	100	100
COKER 916	63	62	53	60	54.3	60.8	55.0	56.7	3	0	0	1	37	30	31	33	100	100	100	100
COKER 9877	63	67	.	65	57.0	58.9	.	57.9	65	0	.	33	40	33	.	36	100	100	.	100
ARTHUR	62	49	44	52	54.1	61.1	54.8	56.7	16	0	0	5	42	35	38	38	100	100	100	100
CALDWELL	62	61	49	57	53.8	61.1	55.4	56.8	0	0	0	0	39	32	33	35	100	100	100	100
COKER 833	61	79	.	70	53.9	59.7	.	56.8	90	0	.	45	40	36	.	38	100	100	.	100
COKER 9323	59	63	.	61	54.9	58.0	.	56.4	23	0	.	11	35	30	.	33	100	100	.	100
WHEELER	59	61	55	59	54.8	62.1	56.8	57.9	31	0	0	10	41	36	41	39	100	100	100	100
COKER 9733	59	62	.	60	56.5	62.4	.	59.4	46	0	.	23	42	37	.	39	100	100	.	100
COMPTON	57	62	56	58	54.9	61.8	56.2	57.6	28	0	0	9	37	34	35	35	100	100	100	100
DOUBLECROP	55	61	53	56	55.3	63.1	58.0	58.8	23	0	0	8	40	36	35	37	100	100	100	100
MEAN	68	66	55	66	54.3	60.1	55.5	56.8	22	0	0	11	38	34	35	36	100	100	100	100

CV= 9.8%

LSD(0.05)= 9.3 BU/A

Table 11.—Characteristics of Barley Varieties Tested in 1989.

VARIETY	PROTECTED	SOURCE	RELEASE DATE	YIELD (BU/A)	TEST WEIGHT (LB/BU)	LODGING (%)	PLANT HEIGHT (IN.)	SURVIVAL (%)	HEADING DATE
SCHOCHOH	NO	KY. BREEDER SEED	1989	108	46.5	21.3	35.8	98.1	26APR89
WYSOR	NO	VIRGINIA	1985	107	42.9	11.3	37.8	97.2	25APR89
BARSOY	NO	KENTUCKY	1966	96.3	46.6	25.6	35.4	98.1	18APR89
PIKE	YES	INDIANA	1975	95.7	45.5	29.4	32.9	99.7	21APR89

CV= 6.5%

LSD(0.05)= 4.71 BU/A

Table 12.—Barley Performance Trials for Western Coal Field Region, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
SCHOCHOH	86	93	110	97	48.0	49.0	45.6	47.5	0	0	0	0	36	35	42	38	93	95	100	96	30APR	26APR	24APR	27APR
PIKE	85	102	95	94	45.2	50.7	47.2	47.7	13	0	0	4	34	31	38	34	100	100	100	100	21APR	20APR	20APR	21APR
BARSOY	83	77	95	85	48.0	49.3	48.8	48.7	16	0	0	5	36	32	38	35	93	80	100	91	18APR	15APR	16APR	17APR
WYSOR	72	95	109	92	43.6	46.7	45.4	45.2	0	0	0	0	38	37	43	39	91	94	100	95	26APR	24APR	23APR	25APR
MEAN	82	92	102	92	46.2	48.9	46.7	47.3	7	0	0	2	36	34	40	37	94	92	100	95	24APR	21APR	21APR	22APR

CV= 8.8%
LSD(0.05)= 10.7 BU/A

Table 13.—Barley Performance Trials for Bluegrass Region, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
WYSOR	100	101	123	108	42.0	48.8	44.8	45.2	45	3	3	17	41	39	43	33	98	91	96	95	01MAY	03MAY	30APR	01MAY
SCHOCHOH	84	87	133	102	43.0	49.1	45.1	45.7	85	3	4	30	38	39	47	34	100	93	100	98	01MAY	05MAY	01MAY	02MAY
BARSOY	71	86	126	94	44.0	53.2	43.8	47.0	86	1	0	29	38	38	43	32	100	91	98	96	26APR	25APR	23APR	25APR
PIKE	71	89	111	90	44.0	51.3	43.7	46.3	95	4	13	37	36	37	41	31	99	94	96	96	28APR	29APR	28APR	29APR
MEAN	81	91	123	99	43.3	50.6	44.3	46.1	78	3	5	28	38	38	43	40	99	92	98	96	29APR	30APR	28APR	29APR

CV= 8.4%
LSD(0.05)= 10.2 BU/A

Table 14.—Barley Performance Trials for Southern Region*, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
SCHOCHOH	137	93	107	112	47.9	41.8	46.7	45.5	0	85	0	28	35	39	40	38	100	100	100	100	22APR	27APR	24APR	25APR
WYSOR	133	98	108	113	43.8	46.3	44.5	44.9	0	69	0	23	38	42	40	40	100	100	100	100	21APR	26APR	23APR	24APR
PIKE	126	99	97	107	47.6	40.6	48.7	45.6	10	43	0	18	33	38	37	36	100	100	100	100	18APR	24APR	20APR	21APR
BARSOY	119	90	93	101	49.5	42.5	45.7	45.9	0	84	0	28	35	39	37	37	100	100	100	100	17APR	19APR	19APR	19APR
MEAN	129	95	101	108	47.2	42.8	46.4	45.5	3	70	0	24	35	39	38	38	100	100	100	100	19APR	24APR	21APR	22APR

CV= 3.4%
LSD(0.05)= 7.4 BU/A

*Location was Princeton, limestone soil.

Table 14A.—Barley Performance Trials for Southern Tier Region*, 1987-1989.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN	1989	1988	1987	MEAN
SCHOCHOH	124	107	98	110	47.3	50.2	43.4	47.0	0	0	73	24	34	39	40	38	100	100	100	100	23APR	23APR	21APR	23APR
WYSOR	124	99	106	110	42.2	46.4	42.6	43.7	0	0	71	24	35	36	43	38	100	100	100	100	25APR	20APR	22APR	22APR
BARSOY	113	104	75	97	44.9	52.0	42.6	46.5	0	0	76	25	34	37	39	36	100	100	100	100	13APR	11APR	16APR	14APR
PIKE	101	122	76	99	45.4	50.4	38.6	44.8	0	0	96	32	30	35	39	35	100	100	100	100	18APR	18APR	21APR	19APR
MEAN	116	108	89	104	44.9	49.7	41.8	45.5	0	0	79	26	33	37	40	37	100	100	100	100	20APR	18APR	20APR	19APR

YIELD C.V. = 6.4%
LSD(0.05)= 11.1 BU/A

*Location was Bowling Green

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