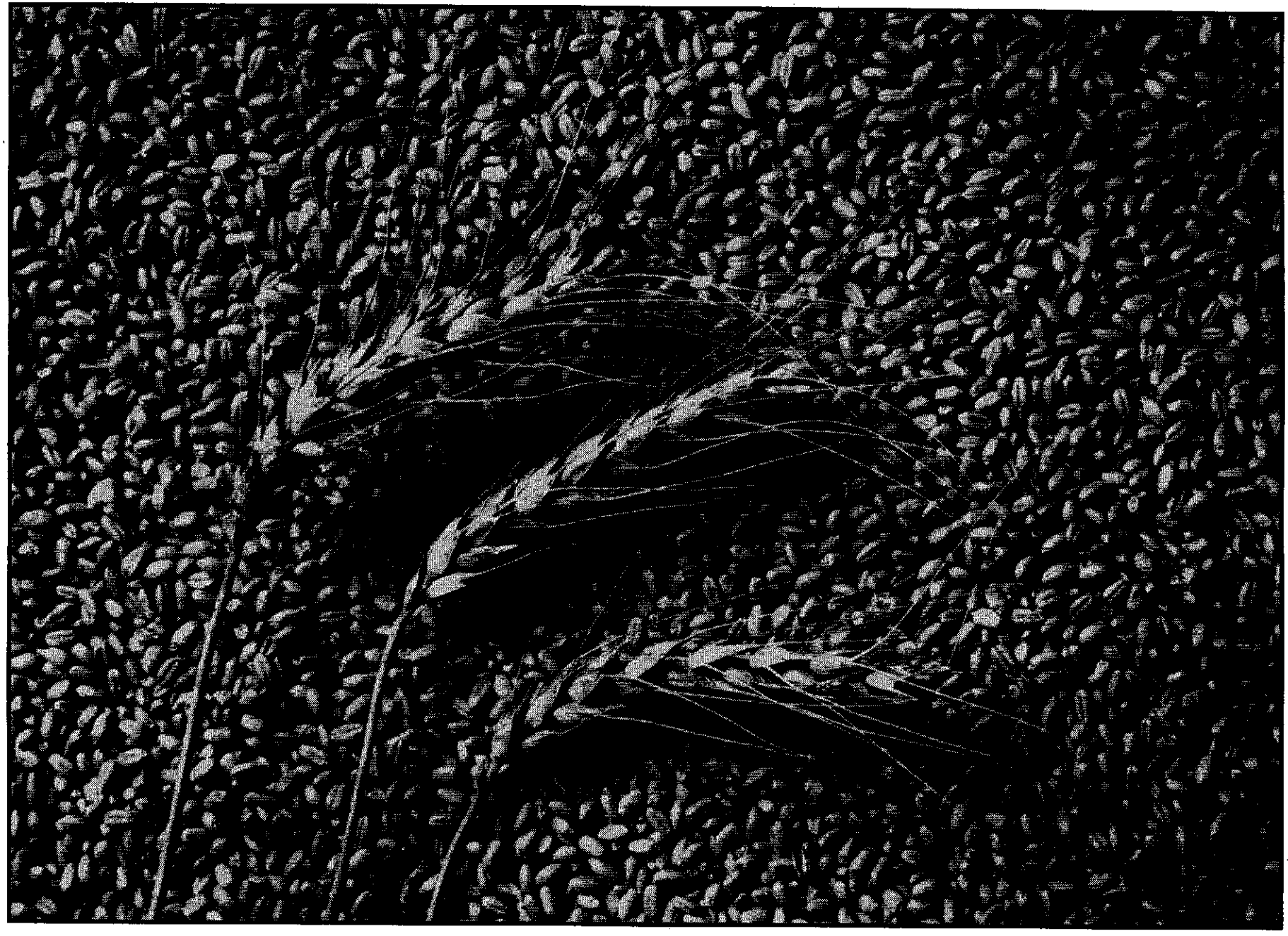
1988 Kentucky Small Grain Variety Trials

Progress Report 314



University of Kentucky • College of Agriculture • Agricultural Experiment Station • Department of Agronomy

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TABLES

1988 Kentucky Small Grain Variety Trials

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In 1988, Kentucky farmers harvested 18.6 million bushels of soft red winter wheat produced on 380,000 acres. The average yield of 49 bu/a was equal to the record wheat yield recorded in 1987. Barley production was up 20% from 1987 levels.

Table 1.—Small Grain Harvested Acreage and Yields in Kentucky, 1986-1988.*

	1988		1987		1986	
Crop	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A
Wheat	380	49	330	49	270	33
Barley	14	63	11	67	17	31
Oats	8	NA	7	52	6	42
Rye	4	NA	2	36	1	28

*July 1, 1988, Kentucky Crop and Livestock Reporting Service. Oat and 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.

Acknowledgement is made to the following individuals for their contributions to the bulletin: Larry Reber, Phil Gillespie, Don Kessler, and Kay Richardson, County Extension Agents for Agriculture, for assistance in locating test sites and collecting data; R.E. Stuckey and D. Hershman for disease ratings; A. Slack, G. Brown, P. Prince, and L. Brown for data collection; J. Byars for data analysis; S. Baker 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

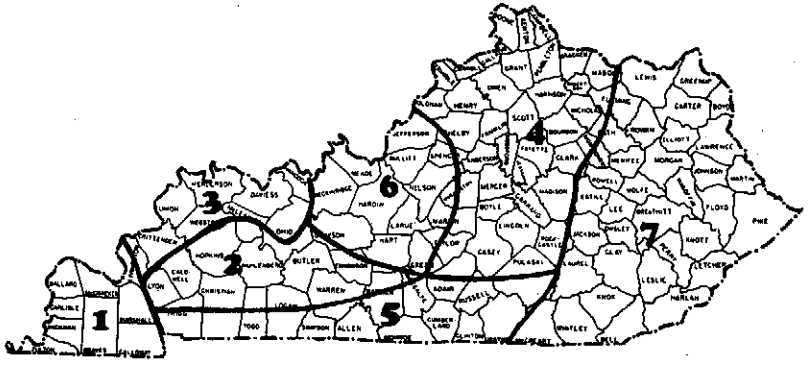

Figure 1.—Agro-climatic regions of Kentucky small grain variety trials.

Region	1988 Location	Cooperator	Crop Tested
1 Purchase	Clinton	Jerry Perry	Wheat
2 Western Coal Field	Princeton (Sandstone soil)	Research and Education Center	Barley, Wheat
3 Ohio Valley	Dixon	Mitchell Bros.	Wheat
4 Bluegrass	Lexington	Kentucky Agricultural Experiment Station	Barley, Wheat
5 Southern Tier	Franklin Princeton (Limestone soil)	Fred Bullock 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, 1986-1988.

Region	Location		Preceding Crop	Crop	Planting Date 1988	1987	1986
Purchase	Clinton	1986	Soybeans	Wheat	10/13	10/18	10/17
		1987	Corn				
		1988	Corn				
Western Coal Field	Princeton (Sandstone soil)		Fallow	Barley	10/14	10/15	10/18
				Wheat	10/14	10/15	10/18
Ohio Valley	Calhoun	1986-87	Soybeans	Wheat	10/16	10/21	10/9
	Dixon	1988	Corn				
Bluegrass	Lexington		Fallow	Barley	10/14	10/15	10/19
				Wheat	10/14	10/15	10/19
Southern Tier	Franklin	1986-88	Corn	Barley	10/12	10/9	10/11
				Wheat	10/12	10/9	10/11
	Princeton (Limestone soil)		Fallow	Barley	10/15	10/16	10/28
				Wheat	10/15	10/16	10/28
North Central	Campbellsville	1986-87	Soybeans	Wheat	10/19	10/22	10/10
	Brandenburg	1988	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 winterhardiness 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.

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.

1986 TEST CONDITIONS

Warm dry weather in late September and early October resulted in earlier than normal planting dates for some of the 1986 small

grains crop. Subsequent rainfall in late October and November delayed or prevented further seeding of wheat and barley, leading to an overall reduction in acreage seeded.

The wet mild November weather led to excessive vegetative growth, disease, and nitrogen deficiency in some small grain fields. These conditions ended abruptly when the temperature dropped sharply on December 1, and much of the top growth was killed. Subsequent temperature fluctuations during January and February and very dry conditions continued to stress the plants. Losses due to winterkill ranged from 10% in parts of western Kentucky to 100% in the central Bluegrass area. The wheat and barley trials at Lexington and the barley trials at Princeton were discarded due to winterkill.

Heading dates were earlier than normal due to warm, dry spring conditions. Early spring disease pressure was minimized by the dry weather, although powdery mildew was observed in wheat fields prior to jointing. The incidence of leaf rust, in particular, was much lower than in recent years because of the dry weather. The prolonged shortage of moisture during early grain fill probably reduced yields to some extent. Heavy rains during mid grainfill resulted in a substantial infestation of glume blotch. Disease ratings are presented in Table 10.

A hard freeze occurred in April when many barley fields had just flowered and early wheats were beginning to flower. Yield losses in these situations were considerable.

In short, it was a difficult year for small grain production in Kentucky. The variety trials were subject to the same stresses as farmers' fields, and consequently, the performance data for 1986 is somewhat more variable than previous years' data.

SMALL GRAIN VARIETIES FOR 1989

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 1988.

VARIETY	PROTECTED*	SOURCE	RELEASE DATE	YIELD (BU/A)	TEST WEIGHT (LB/BU)	LODGING (%)	PLANT HEIGHT (IN.)	SURVIVAL (%)	HEADING DATE
2555	YES	PIONEER HI BRED INT	1987	86.6	60.7	0.0	44.6	96.4	05MAY88
BECKER	YES	OHIO	1985	83.1	58.3	0.0	40.5	98.2	09MAY88
SALUDA	YES	VIRGINIA	1983	81.3	61.7	0.2	42.7	96.3	07MAY88
TWAIN	YES	NAPB	1986	81.1	62.0	3.9	48.2	99.1	04MAY88
FLA 302	YES	FLORIDA	1983	81.0	58.7	0.5	45.8	97.1	07MAY88
PACER	YES	HYBRITECH	1987	80.3	59.8	1.3	44.4	97.9	06MAY88
COKER 9877	YES	COKER SEEDS	1986	80.1	58.6	1.6	45.3	95.2	08MAY88
COKER 833	YES	SOUTHERN STATES COOP.	1984	79.7	58.7	2.0	46.3	99.3	08MAY88
CARDINAL	YES	OHIO	1986	79.2	58.7	0.0	47.9	98.2	09MAY88
2550	YES	PIONEER HI BRED INT	1982	78.7	60.4	0.4	44.4	97.9	09MAY88
TYLER	NO	VIRGINIA	1980	78.7	59.0	0.2	47.4	96.4	08MAY88
CLARK	YES	INDIANA	1988	77.2	59.6	0.0	45.0	99.3	03MAY88
COKER 916	YES	COKER SEEDS	1982	76.8	60.1	0.7	41.8	97.5	01MAY88
PIKE	YES	MISSOURI	1980	76.3	59.8	3.2	48.1	97.7	06MAY88
COKER 9733	YES	COKER SEEDS	1986	76.1	61.0	2.3	49.2	96.3	05MAY88
MASSEY	NO	VIRGINIA	1981	76.0	59.9	3.4	46.9	97.3	05MAY88
STEELE	YES	NAPB	1987	75.5	56.6	0.0	44.0	97.9	06MAY88
KEISER	YES	ARKANSAS	1987	75.3	59.7	8.8	51.5	98.0	06MAY88
COKER 9323	YES	COKER SEEDS	1986	74.5	58.7	0.0	41.8	97.7	04MAY88
LINCOLN	YES	NAPB	1986	74.2	59.7	2.3	45.6	97.0	07MAY88
COKER 9766	YES	COKER SEEDS	1987	73.7	57.7	8.6	44.3	98.2	07MAY88
SCOTTY	NO	ILLINOIS	1982	73.2	59.2	0.5	44.5	99.1	07MAY88
2551	YES	PIONEER HI BRED INT	1986	72.8	58.2	0.0	44.0	98.9	07MAY88
CALDWELL	YES	INDIANA	1980	72.2	60.3	0.2	44.7	97.5	07MAY88
TRAVELER	YES	NAPB	1987	71.4	60.3	0.0	42.5	89.6	30APR88
DYNASTY	YES	OHIO	1987	70.7	60.1	0.0	46.4	97.3	08MAY88
WHEELER	NO	VIRGINIA	1980	70.5	61.5	7.1	49.9	97.7	07MAY88
COMPTON	YES	INDIANA	1984	70.1	61.1	0.4	43.2	98.8	08MAY88
HART	NO	MISSOURI	1976	70.0	60.8	3.6	47.2	98.8	06MAY88
ADENA	YES	OHIO	1984	67.5	58.2	0.0	40.9	97.7	07MAY88
ADDER	YES	INDIANA	1985	64.8	57.0	0.0	42.1	97.7	07MAY88
ABE	YES	INDIANA	1972	63.1	61.1	0.2	45.6	98.0	06MAY88
DOUBLECROP	NO	ARKANSAS	1975	61.8	62.6	1.4	47.9	99.3	29APR88
ARTHUR	NO	INDIANA	1968	60.8	61.1	1.4	48.5	96.6	06MAY88
MAGNUM	YES	NAPB	1983	57.8	60.2	0.0	41.8	95.4	06MAY88

CV=10% The CV is a measure of experimental error. The lower the CV, the more reliable the results.

LSD(0.05)=4.2 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. 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, 1986-1988.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN
2555	92	.	.	92	59.8	.	.	59.8	0	.	.	0	41	.	.	41	100	.	.	100	02MAY			02MAY
KEISER	87	.	.	87	59.4	.	.	59.4	0	.	.	0	46	.	.	46	100	.	.	100	03MAY			03MAY
FLA 302	85	64	25	58	57.3	55.7	59.4	57.5	0	0	0	0	41	38	30	36	100	100	43	81	07MAY	03MAY	01MAY	04MAY
SALUDA	84	67	40	64	56.6	58.8	60.0	58.5	0	0	0	0	38	33	30	34	100	100	76	92	07MAY	02MAY	27APR	02MAY
BECKER	84	70	52	69	57.8	55.6	57.7	57.0	0	0	0	0	37	35	32	35	100	100	80	93	07MAY	02MAY	29APR	03MAY
COKER 9733	82	.	.	82	60.3	.	.	60.3	0	.	.	0	44	.	.	44	100	.	.	100	04MAY			04MAY
COKER 9877	80	.	.	80	59.0	.	.	59.0	0	.	.	0	39	.	.	39	100	.	.	100	05MAY			05MAY
TWAIN	79	70	40	63	60.7	58.8	60.8	60.1	0	0	0	0	43	39	35	39	100	100	75	92	02MAY	27APR	26APR	28APR
PACER	77	.	.	77	60.1	.	.	60.1	0	.	.	0	37	.	.	37	100	.	.	100	05MAY			05MAY
COKER 833	76	.	.	76	56.7	.	.	56.7	6	.	.	6	41	.	.	41	100	.	.	100	07MAY			07MAY
COKER 9766	74	.	.	74	55.8	.	.	55.8	0	.	.	0	39	.	.	39	100	.	.	100	05MAY			05MAY
CARDINAL	73	69	.	71	55.9	56.9	.	56.4	0	0	.	0	42	39	.	40	100	100	.	100	07MAY	02MAY		05MAY
TYLER	72	64	54	63	56.4	57.5	58.3	57.4	0	0	0	0	41	39	38	39	100	100	81	94	07MAY	02MAY	27APR	02MAY
LINCOLN	71	65	42	60	58.9	56.5	59.6	58.3	0	0	0	0	40	38	35	37	100	100	83	94	06MAY	01MAY	26APR	01MAY
COKER 916	70	65	43	59	59.0	56.1	58.1	57.7	3	0	0	1	37	34	31	34	100	100	86	95	29APR	23APR	23APR	25APR
MASSEY	69	73	54	66	56.9	58.8	59.3	58.3	0	0	0	0	41	39	38	39	100	100	93	98	02MAY	01MAY	26APR	30APR
HART	69	59	41	56	59.3	58.5	58.4	58.7	0	0	0	0	43	39	37	40	100	100	74	91	05MAY	30APR	28APR	01MAY
PIKE	68	58	42	56	57.2	56.9	60.4	58.2	0	0	0	0	42	37	35	38	100	100	75	92	06MAY	30APR	27APR	02MAY
STEELE	67	.	.	67	55.9	.	.	55.9	0	.	.	0	39	.	.	39	100	.	.	100	05MAY			05MAY
2550	67	65	51	61	59.2	56.7	61.0	59.0	0	0	0	0	38	36	34	36	100	100	73	91	07MAY	02MAY	30APR	03MAY
TRAVELER	66	.	.	66	59.4	.	.	59.4	0	.	.	0	37	.	.	37	94	.	.	94	27APR			27APR
DYNASTY	66	.	.	66	58.8	.	.	58.8	0	.	.	0	41	.	.	41	100	.	.	100	06MAY			06MAY
CLARK	65	.	.	65	58.7	.	.	58.7	0	.	.	0	40	.	.	40	100	.	.	100	01MAY			01MAY
SCOTTY	65	50	43	53	57.1	57.0	60.8	58.3	0	0	0	0	39	34	35	36	100	100	80	93	05MAY	30APR	26APR	01MAY
WHEELER	65	63	43	57	60.2	60.4	60.6	60.4	3	0	0	1	46	41	36	41	100	100	66	89	06MAY	01MAY	26APR	02MAY
COKER 9323	63	.	.	63	55.9	.	.	55.9	0	.	.	0	36	.	.	36	100	.	.	100	03MAY			03MAY
CALDWELL	62	50	41	51	58.4	55.6	60.8	58.3	0	0	0	0	37	36	34	36	100	100	79	93	04MAY	30APR	27APR	01MAY
COMPTON	62	55	35	51	59.4	58.3	61.0	59.6	0	0	0	0	39	36	33	36	100	100	76	92	07MAY	01MAY	27APR	02MAY
2551	61	67	46	58	56.4	55.3	57.6	56.4	0	0	0	0	38	34	33	35	100	100	79	93	07MAY	02MAY	28APR	02MAY
DOUBLECROP	60	49	26	45	61.2	60.1	58.4	59.9	0	0	0	0	41	39	34	38	100	100	69	90	28APR	21APR	18APR	23APR
ADDER	56	54	47	52	56.1	54.7	58.7	56.5	0	0	0	0	35	35	31	34	100	100	78	93	04MAY	01MAY	26APR	01MAY
ARTHUR	55	47	34	46	59.5	56.9	60.8	59.1	0	0	0	0	42	37	35	38	100	100	79	93	05MAY	28APR	26APR	30APR
MAGNUM	54	50	.	52	57.9	54.7	.	56.3	0	0	.	0	35	33	.	34	100	100	.	100	04MAY	28APR		01MAY
ADENA	54	66	39	53	57.5	57.2	58.5	57.7	0	0	0	0	35	33	31	33	100	100	83	94	06MAY	01MAY	26APR	01MAY
ABE	48	46	34	43	58.5	59.1	60.4	59.3	0	0	0	0	39	34	32	35	100	100	79	93	06MAY	29APR	26APR	30APR
MEAN	69	60	41	63	58.2	57.2	59.6	58.2	0	0	0	0	40	36	34	38	100	100	76	95	04MAY	30APR	26APR	01MAY

CV= 12.9%
LSD(0.05)= 12.6 BU/A

Table 5.—Wheat Performance Trials for Western Coal Field Region, 1986-1988.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN
COKER 9877	72	.	.	72	59.4	.	.	59.4	0	.	.	0	37	.	.	37	99	.	.	99	08MAY			08MAY
FLA 302	70	69	6	49	59.6	51.9	52.8	54.8	0	0	0	0	39	38	25	34	100	100	2	67	09MAY	06MAY	06MAY	08MAY
COKER 833	69	.	.	69	59.6	.	.	59.6	0	.	.	0	38	.	.	38	100	.	.	100	09MAY			09MAY
TYLER	69	72	41	61	59.6	58.4	55.2	57.7	0	0	0	0	39	41	30	37	100	100	29	76	09MAY	06MAY	05MAY	07MAY
2550	69	71	30	57	61.1	57.7	53.4	57.4	0	0	0	0	37	38	27	34	100	100	30	77	09MAY	06MAY	04MAY	07MAY
PIKE	68	56	22	48	60.9	57.0	55.6	57.8	0	0	0	0	39	40	27	35	100	100	26	75	08MAY	05MAY	04MAY	06MAY
COKER 9766	67	.	.	67	58.4	.	.	58.4	0	.	.	0	36	.	.	36	100	.	.	100	09MAY			09MAY
PACER	67	.	.	67	60.2	.	.	60.2	0	.	.	0	36	.	.	36	100	.	.	100	07MAY			07MAY
COKER 916	67	63	19	50	60.0	57.1	58.6	58.6	0	0	0	0	33	36	24	31	100	100	19	73	02MAY	30APR	02MAY	02MAY
BECKER	66	70	29	55	58.4	55.4	56.4	56.7	0	0	0	0	33	36	26	32	100	100	19	73	10MAY	07MAY	05MAY	07MAY
LINCOLN	66	71	29	55	60.1	57.1	54.0	57.1	0	0	0	0	38	40	29	35	100	100	18	73	07MAY	05MAY	02MAY	05MAY
TWAIN	65	64	28	52	61.5	58.8	59.8	60.0	0	0	0	0	38	42	30	36	100	100	31	77	04MAY	02MAY	04MAY	04MAY
COKER 9733	65	.	.	65	61.4	.	.	61.4	0	.	.	0	41	.	.	41	100	.	.	100	06MAY			06MAY
TRAVELER	64	.	.	64	60.5	.	.	60.5	0	.	.	0	34	.	.	34	84	.	.	84	01MAY			01MAY
MASSEY	63	74	31	56	60.7	55.5	53.1	56.4	0	0	0	0	37	40	29	35	100	100	28	76	06MAY	05MAY	04MAY	05MAY
2555	63	.	.	63	61.0	.	.	61.0	0	.	.	0	35	.	.	35	100	.	.	100	07MAY			07MAY
SALUDA	62	67	26	52	62.4	58.5	59.4	60.1	0	0	0	0	34	34	26	31	100	100	20	73	09MAY	05MAY	03MAY	06MAY
WHEELER	62	66	31	53	61.5	57.2	60.0	59.6	0	0	0	0	41	43	28	37	100	100	16	72	07MAY	04MAY	02MAY	05MAY
STEELE	61	.	.	61	57.4	.	.	57.4	0	.	.	0	35	.	.	35	100	.	.	100	07MAY			07MAY
COKER 9323	61	.	.	61	58.6	.	.	58.6	0	.	.	0	34	.	.	34	100	.	.	100	05MAY			05MAY
CLARK	60	.	.	60	58.9	.	.	58.9	0	.	.	0	35	.	.	35	100	.	.	100	04MAY			04MAY
CALDWELL	59	57	33	50	61.0	56.1	56.8	58.0	0	0	0	0	37	37	29	34	100	100	28	76	07MAY	04MAY	03MAY	05MAY
ADENA	59	68	17	48	58.9	57.0	53.7	56.5	0	0	0	0	35	35	23	31	100	100	18	73	07MAY	04MAY	04MAY	06MAY
CARDINAL	59	73	.	66	59.5	57.3	.	58.4	0	0	.	0	39	41	.	40	100	100	.	100	10MAY	05MAY		08MAY
DYNASTY	58	.	.	58	60.1	.	.	60.1	0	.	.	0	37	.	.	37	100	.	.	100	09MAY			09MAY
DOUBLECROP	58	62	14	44	62.8	60.7	56.0	59.8	0	0	0	0	40	42	27	36	100	100	20	73	29APR	28APR	26APR	28APR
SCOTTY	57	58	21	45	60.2	56.6	57.4	58.1	0	0	0	0	37	36	26	33	100	100	17	72	08MAY	04MAY	02MAY	05MAY
COMPTON	57	66	36	53	60.3	58.5	59.3	59.4	0	0	0	0	35	39	28	34	100	100	33	78	08MAY	05MAY	03MAY	06MAY
HART	54	71	20	48	61.0	58.3	54.0	57.8	0	0	0	0	38	43	26	36	100	100	17	72	06MAY	04MAY	04MAY	05MAY
KEISER	53	.	.	53	60.7	.	.	60.7	0	.	.	0	43	.	.	43	100	.	.	100	07MAY			07MAY
ABE	53	58	17	43	60.7	57.7	58.0	58.8	0	0	0	0	36	34	27	32	98	100	13	70	06MAY	03MAY	03MAY	04MAY
2551	52	64	28	48	59.9	55.5	54.1	56.5	0	0	0	0	36	35	27	33	100	100	25	75	09MAY	06MAY	02MAY	06MAY
ARTHUR	49	62	21	44	61.5	58.5	56.8	58.9	0	0	0	0	39	42	29	36	100	100	33	78	08MAY	02MAY	02MAY	04MAY
ADDER	46	64	24	45	57.6	55.0	55.4	56.0	0	0	0	0	34	38	26	33	100	100	19	73	09MAY	06MAY	03MAY	06MAY
MAGNUM	43	46	.	45	61.2	58.6	.	59.9	0	0	.	0	35	34	.	34	96	100	.	98	08MAY	02MAY		05MAY
MEAN	61	65	25	55	60.2	57.1	56.2	58.6	0	0	0	0	37	38	27	35	99	100	22	84	07MAY	04MAY	03MAY	05MAY

CV= 11.8%
LSD(0.05)= 10 BU/A

Table 6.—Wheat Performance Trials for Ohio Valley Region, 1986-1988.

VARIETY	-- YIELD (BU/AC) -- 1988	1987	1986	MEAN	TEST WT (LB/BU) 1988	1987	1986	MEAN	--- PCT LODGED --- 1988	1987	1986	MEAN	PLANT HEIGHT (IN) 1988	1987	1986	MEAN	-- PCT SURVIVAL -- 1988	1987	1986	MEAN	HEADING DATE 1988	1987	1986	MEAN
COKER 9877	106	.	.	106	61.3	.	.	61.3	0	.	.	0	43	.	.	43	100	.	.	100	06MAY			06MAY
BECKER	99	49	49	66	60.4	53.9	56.0	56.8	0	0	0	0	37	30	32	33	100	100	88	96	10MAY	10MAY	03MAY	08MAY
SALUDA	98	52	49	66	63.9	54.4	59.8	59.4	0	0	0	0	38	30	31	33	100	100	83	94	07MAY	08MAY	02MAY	06MAY
PACER	96	.	.	96	61.9	.	.	61.9	0	.	.	0	40	.	.	40	100	.	.	100	07MAY			07MAY
TWAIN	96	47	35	59	63.0	56.6	59.2	59.6	0	0	0	0	42	35	35	37	100	100	81	94	04MAY	04MAY	29APR	03MAY
COKER 833	96	.	.	96	61.0	.	.	61.0	0	.	.	0	43	.	.	43	100	.	.	100	07MAY			07MAY
STEELE	96	.	.	96	58.7	.	.	58.7	0	.	.	0	41	.	.	41	100	.	.	100	06MAY			06MAY
FLA 302	95	51	26	57	61.2	55.1	55.5	57.3	0	0	0	0	40	34	34	36	100	100	60	87	06MAY	08MAY	03MAY	06MAY
TYLER	94	45	51	63	61.1	55.6	56.0	57.6	0	0	0	0	43	36	38	39	100	100	89	96	07MAY	08MAY	02MAY	06MAY
CARDINAL	94	44	.	69	60.8	57.0	.	58.9	0	0	.	0	44	35	.	40	100	100	.	100	08MAY	09MAY		09MAY
COKER 9733	92	.	.	92	63.0	.	.	63.0	0	.	.	0	46	.	.	46	100	.	.	100	05MAY			05MAY
COKER 916	91	46	40	59	61.7	54.7	57.8	58.1	0	0	0	0	39	30	32	34	100	100	86	95	01MAY	03MAY	27APR	01MAY
MASSEY	91	47	44	61	61.3	56.5	57.7	58.5	0	0	0	0	42	35	37	38	100	100	90	97	04MAY	08MAY	01MAY	05MAY
2555	90	.	.	90	62.1	.	.	62.1	0	.	.	0	39	.	.	39	100	.	.	100	07MAY			07MAY
KEISER	90	.	.	90	62.0	.	.	62.0	0	.	.	0	48	.	.	48	100	.	.	100	06MAY			06MAY
COKER 9323	90	.	.	90	60.3	.	.	60.3	0	.	.	0	38	.	.	38	100	.	.	100	04MAY			04MAY
TRAVELER	89	.	.	89	62.4	.	.	62.4	0	.	.	0	40	.	.	40	100	.	.	100	30APR			30APR
COMPTON	88	43	39	57	62.6	56.7	59.3	59.5	0	0	0	0	38	32	35	35	100	100	83	94	07MAY	08MAY	02MAY	06MAY
SCOTTY	88	49	51	63	61.2	55.7	58.5	58.5	0	0	0	0	40	34	36	37	100	100	90	97	07MAY	07MAY	30APR	05MAY
2551	86	50	39	58	60.5	54.7	54.3	56.5	0	0	0	0	39	31	31	33	100	100	93	98	07MAY	07MAY	01MAY	05MAY
2550	85	52	47	61	62.3	55.3	57.0	58.2	0	0	0	0	39	32	34	35	100	100	89	96	08MAY	09MAY	04MAY	07MAY
CALDWELL	84	50	54	63	62.4	54.6	56.7	57.9	0	0	0	0	40	33	41	38	100	100	93	98	07MAY	06MAY	01MAY	05MAY
CLARK	83	.	.	83	59.5	.	.	59.5	0	.	.	0	40	.	.	40	100	.	.	100	04MAY			04MAY
WHEELER	83	44	42	56	63.4	56.6	60.1	60.0	5	0	0	2	43	38	38	40	100	100	88	96	06MAY	07MAY	30APR	05MAY
PIKE	82	45	35	54	61.2	55.5	54.8	57.2	0	0	0	0	42	36	34	37	100	100	83	94	05MAY	07MAY	02MAY	05MAY
COKER 9766	81	.	.	81	61.3	.	.	61.3	3	.	.	3	40	.	.	40	100	.	.	100	07MAY			07MAY
ABE	79	40	34	51	62.4	55.5	57.2	58.4	0	0	0	0	42	35	35	37	100	100	86	95	06MAY	06MAY	29APR	04MAY
LINCOLN	79	45	44	56	61.0	55.9	57.2	58.0	0	0	0	0	39	33	34	36	100	100	85	95	07MAY	07MAY	01MAY	05MAY
ADENA	77	46	27	50	61.4	56.3	53.2	57.0	0	0	0	0	37	30	29	32	100	100	93	98	07MAY	07MAY	30APR	05MAY
ADDER	74	42	31	49	59.0	52.5	55.8	55.8	0	0	0	0	37	32	31	34	100	100	93	98	07MAY	08MAY	02MAY	06MAY
HART	72	45	39	52	62.1	55.5	56.9	58.2	0	0	0	0	41	36	34	37	100	100	81	94	07MAY	06MAY	02MAY	05MAY
DYNASTY	69	.	.	69	62.3	.	.	62.3	0	.	.	0	40	.	.	40	100	.	.	100	08MAY			08MAY
MAGNUM	69	45	.	57	62.4	56.1	.	59.2	0	0	.	0	37	29	.	33	100	100	.	100	05MAY	04MAY		05MAY
ARTHUR	67	42	27	46	62.4	56.2	57.8	58.8	0	0	0	0	42	38	35	38	100	100	94	98	05MAY	06MAY	28APR	03MAY
DOUBLECROP	64	49	16	43	63.2	56.5	56.8	58.8	0	0	0	0	42	37	36	38	100	100	90	97	28APR	29APR	26APR	28APR
MEAN	86	46	39	68	61.6	55.5	57.0	59.3	0	0	0	0	40	33	34	38	100	100	86	97	06MAY	07MAY	01MAY	04MAY

CV= 10.6%
LSD(0.05)= 13.0 BU/A

Table 7.—Wheat Performance Trials for Bluegrass Region, 1985, 1987, 1988.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN
PIKE	70	55	69	64	60.8	54.3	57.9	57.7	0	25	26	17	36	45	41	41	91	96	99	95	12MAY	12MAY	07MAY	10MAY
TWAIN	69	70	80	73	61.6	56.4	61.7	59.9	0	63	30	31	36	45	40	40	94	95	93	94	11MAY	10MAY	05MAY	07MAY
SALUDA	69	77	91	79	63.7	52.7	60.0	58.8	0	85	50	45	33	38	36	36	89	96	98	94	13MAY	11MAY	07MAY	10MAY
LINCOLN	68	56	.	62	59.4	50.8	.	55.1	0	88	.	44	34	40	.	37	86	96	.	91	13MAY	12MAY		13MAY
KEISER	68	.	.	68	59.8	.	.	59.8	0	.	.	0	37	.	.	37	86	.	.	86	13MAY			13MAY
2550	66	70	78	71	59.4	53.7	61.5	58.2	0	33	8	13	34	40	37	37	93	95	99	95	15MAY	13MAY	08MAY	12MAY
CARDINAL	66	61	.	64	59.5	52.8	.	56.1	0	35	.	18	35	43	.	39	88	94	.	91	14MAY	14MAY		14MAY
CLARK	66	.	.	66	60.2	.	.	60.2	0	.	.	0	33	.	.	33	95	.	.	95	10MAY			10MAY
SCOTTY	64	59	84	69	59.7	54.5	59.3	57.8	0	30	11	14	32	40	40	37	94	93	98	95	14MAY	14MAY	07MAY	12MAY
FLA 302	63	69	93	75	56.8	48.0	57.4	54.1	0	63	30	31	35	43	36	38	90	95	98	94	14MAY	12MAY	07MAY	11MAY
2555	63	.	.	63	60.8	.	.	60.8	0	.	.	0	32	.	.	32	90	.	.	90	11MAY			11MAY
BECKER	62	41	.	52	56.5	49.2	.	52.8	0	4	.	2	28	33	.	31	88	95	.	91	15MAY	15MAY		15MAY
COKER 833	62	.	.	62	57.2	.	.	57.2	0	.	.	0	33	.	.	33	95	.	.	95	15MAY			15MAY
STEELE	61	.	.	61	56.7	.	.	56.7	0	.	.	0	32	.	.	32	93	.	.	93	13MAY			13MAY
TYLER	61	69	71	67	59.6	52.5	54.5	55.5	0	18	13	10	34	44	42	40	90	94	99	94	14MAY	14MAY	08MAY	12MAY
WHEELER	61	62	81	68	62.3	56.3	61.5	60.0	0	53	10	21	37	47	41	42	91	100	98	96	14MAY	13MAY	07MAY	11MAY
COKER 9323	60	.	.	60	58.9	.	.	58.9	0	.	.	0	31	.	.	31	91	.	.	91	12MAY			12MAY
COKER 916	60	66	83	70	59.2	50.9	60.2	56.8	0	59	34	31	31	40	35	35	90	95	99	95	10MAY	09MAY	03MAY	07MAY
HART	60	60	59	60	61.7	55.0	58.0	58.2	0	11	8	6	34	45	39	39	91	99	100	97	13MAY	12MAY	06MAY	10MAY
COKER 9877	60	.	.	60	57.9	.	.	57.9	0	.	.	0	34	.	.	34	86	.	.	86	17MAY			17MAY
2551	59	57	.	58	58.1	50.5	.	54.3	0	59	.	29	34	39	.	37	93	99	.	96	14MAY	13MAY		14MAY
DYNASTY	59	.	.	59	61.4	.	.	61.4	0	.	.	0	35	.	.	35	89	.	.	89	14MAY			14MAY
PACER	59	.	.	59	59.5	.	.	59.5	0	.	.	0	32	.	.	32	93	.	.	93	14MAY			14MAY
MASSEY	59	64	63	62	60.8	56.2	51.8	56.3	0	53	33	28	35	45	40	40	89	99	99	95	13MAY	12MAY	05MAY	10MAY
COKER 9766	59	.	.	59	57.6	.	.	57.6	0	.	.	0	33	.	.	33	88	.	.	88	15MAY			15MAY
COMPTON	58	59	84	67	62.0	55.1	54.7	57.3	0	68	5	24	31	39	38	36	91	99	99	96	14MAY	14MAY	07MAY	12MAY
COKER 9733	57	.	.	57	62.0	.	.	62.0	0	.	.	0	35	.	.	35	93	.	.	93	13MAY			13MAY
CALDWELL	56	49	81	62	59.8	50.0	59.7	56.5	0	59	28	29	34	39	40	38	83	94	99	92	13MAY	11MAY	07MAY	10MAY
TRAVELER	55	.	.	55	60.5	.	.	60.5	0	.	.	0	32	.	.	32	90	.	.	90	10MAY			10MAY
ADENA	55	48	68	57	57.0	55.0	59.9	57.3	0	34	8	14	29	40	36	35	84	96	100	93	15MAY	13MAY	07MAY	12MAY
DOUBLECROP	54	55	75	61	63.7	58.5	61.7	61.3	0	16	15	10	35	46	40	40	95	95	99	96	09MAY	08MAY	02MAY	06MAY
ADDER	53	55	79	62	55.4	50.8	59.0	55.1	0	68	19	29	32	39	38	36	84	96	98	93	14MAY	14MAY	07MAY	12MAY
ABE	51	53	73	59	61.5	56.2	61.5	59.7	0	43	15	19	33	44	40	39	89	96	96	94	13MAY	13MAY	06MAY	11MAY
ARTHUR	50	61	74	62	62.1	52.0	61.7	58.6	0	35	8	14	36	47	44	42	84	96	99	93	12MAY	12MAY	06MAY	10MAY
MAGNUM	43	54	80	59	60.9	54.2	57.6	57.6	0	38	14	17	32	39	37	36	71	96	99	89	12MAY	12MAY	05MAY	10MAY
MEAN	60	60	77	63	59.8	53.3	58.9	57.9	0	45	19	14	33	42	39	38	89	96	98	93	13MAY	12MAY	06MAY	10MAY

CV= 8.3%
LSD(0.05)= 7.0 BU/A

Table 8.—Wheat Performance Trials for Southern Tier Region*, 1986-1988.

VARIETY	-- YIELD (BU/AC) -- 1988	1987	1986	MEAN	TEST WT (LB/BU) 1988	1987	1986	MEAN	--- PCT LODGED --- 1988	1987	1986	MEAN	PLANT HEIGHT (IN) 1988	1987	1986	MEAN	-- PCT SURVIVAL -- 1988	1987	1986	MEAN	HEADING DATE 1988	1987	1986	MEAN
2555	107	.	.	107	60.0	.	.	60.0	0	.	.	0	41	.	.	41	85	.	.	85	03MAY			03MAY
CLARK	97	.	.	97	59.6	.	.	59.6	0	.	.	0	41	.	.	41	100	.	.	100	03MAY			03MAY
FLA 302	94	79	14	62	57.3	55.6	40.8	51.2	4	8	0	4	41	39	25	35	100	100	4	68	07MAY	05MAY	11MAY	08MAY
2551	94	76	41	70	57.1	51.5	47.2	51.9	0	0	0	0	40	34	32	35	100	100	48	83	06MAY	05MAY	03MAY	05MAY
COKER 916	92	72	27	64	58.9	55.5	50.6	55.0	3	44	0	15	37	35	24	32	93	100	10	68	01MAY	29APR	05MAY	02MAY
2550	91	79	35	68	58.6	53.7	52.0	54.8	3	5	0	3	40	37	30	36	93	100	23	72	08MAY	05MAY	06MAY	07MAY
BECKER	90	85	30	68	56.9	54.2	49.8	53.6	0	0	0	0	38	34	27	33	100	100	21	74	08MAY	05MAY	06MAY	07MAY
COKER 9323	90	.	.	90	58.5	.	.	58.5	0	.	.	0	37	.	.	37	100	.	.	100	06MAY			06MAY
SALUDA	89	73	38	67	60.2	57.3	57.2	58.2	1	0	0	0	38	34	26	33	85	100	14	66	07MAY	03MAY	03MAY	05MAY
COKER 9733	89	.	.	89	56.2	.	.	56.2	16	.	.	16	44	.	.	44	93	.	.	93	05MAY			05MAY
TRAVELER	88	.	.	88	59.2	.	.	59.2	0	.	.	0	39	.	.	39	88	.	.	88	28APR			28APR
TYLER	87	74	31	64	55.7	55.2	48.6	53.2	1	3	0	1	45	40	32	39	85	100	30	72	08MAY	04MAY	05MAY	06MAY
COKER 9877	84	.	.	84	54.1	.	.	54.1	11	.	.	11	39	.	.	39	93	.	.	93	09MAY			09MAY
CARDINAL	84	87	.	85	57.1	55.7	.	56.4	0	0	.	0	43	41	.	42	100	100	.	100	10MAY	04MAY		07MAY
MASSEY	83	80	25	63	57.9	56.3	47.0	53.7	24	25	0	16	42	39	33	38	93	100	24	72	05MAY	03MAY	07MAY	05MAY
CALDWELL	83	76	46	68	58.4	53.4	52.2	54.7	1	0	0	0	41	37	31	36	100	100	25	75	07MAY	02MAY	03MAY	04MAY
HART	83	69	18	57	59.5	56.5	47.6	54.5	25	0	0	8	44	40	30	38	100	100	9	70	05MAY	03MAY	08MAY	06MAY
PACER	81	.	.	81	56.1	.	.	56.1	9	.	.	9	40	.	.	40	93	.	.	93	06MAY			06MAY
TWAIN	80	80	33	64	62.2	57.2	54.0	57.8	28	6	0	11	44	40	33	39	100	100	29	76	04MAY	30APR	02MAY	02MAY
SCOTTY	80	75	35	63	56.8	57.0	52.4	55.4	4	4	0	3	41	37	30	36	100	100	18	73	06MAY	04MAY	05MAY	05MAY
DYNASTY	78	.	.	78	56.9	.	.	56.9	0	.	.	0	43	.	.	43	93	.	.	93	07MAY			07MAY
PIKE	78	68	26	57	56.8	52.7	49.0	52.8	23	3	0	8	43	39	29	37	93	100	24	72	07MAY	01MAY	07MAY	05MAY
STERLE	77	.	.	77	50.6	.	.	50.6	0	.	.	0	39	.	.	39	93	.	.	93	06MAY			06MAY
COKER 833	76	.	.	76	55.9	.	.	55.9	8	.	.	8	40	.	.	40	100	.	.	100	08MAY			08MAY
COMPTON	76	73	39	63	59.1	57.7	56.0	57.6	3	11	0	5	39	37	31	36	100	100	33	78	08MAY	05MAY	04MAY	06MAY
DOUBLECROP	72	72	28	57	61.6	59.5	56.0	59.0	10	0	0	3	43	41	30	38	100	100	16	72	28APR	27APR	27APR	27APR
LINCOLN	71	79	36	62	57.5	56.5	54.1	56.0	16	3	0	6	41	38	32	37	93	100	24	72	07MAY	03MAY	02MAY	04MAY
ABE	71	67	31	56	61.2	57.4	55.2	57.9	1	4	0	2	42	41	31	38	100	100	19	73	06MAY	02MAY	01MAY	03MAY
ADENA	70	77	22	56	56.1	53.4	50.0	53.2	0	0	0	0	38	35	25	32	100	100	16	72	07MAY	03MAY	08MAY	06MAY
ADDER	70	68	40	59	54.7	52.0	53.5	53.4	0	0	0	0	38	37	30	35	100	100	30	77	08MAY	03MAY	04MAY	05MAY
ARTHUR	68	70	39	59	60.0	57.4	56.5	58.0	10	0	0	3	45	42	35	41	93	100	24	72	06MAY	02MAY	01MAY	03MAY
WHEELER	68	77	28	58	59.1	58.1	53.8	57.0	43	15	0	19	44	44	28	38	93	100	11	68	07MAY	04MAY	06MAY	06MAY
MAGNUM	68	67	.	68	58.3	56.1	.	57.2	0	0	.	0	37	34	.	36	100	100	.	100	07MAY	01MAY		05MAY
COKER 9766	67	.	.	67	53.1	.	.	53.1	58	.	.	58	38	.	.	38	100	.	.	100	07MAY			07MAY
KEISER	66	.	.	66	55.8	.	.	55.8	61	.	.	61	44	.	.	44	100	.	.	100	05MAY			05MAY
MEAN	81	75	31	70	57.6	55.6	51.6	55.7	10	6	0	8	41	38	30	38	96	100	21	82	06MAY	03MAY	04MAY	04MAY

CV= 12.5%
LSD(0.05)= 14 BU/A

*Location was Princeton, limestone soil.

Table 8A.—Wheat Performance Trials for Southern Tier Region*, 1986-1988.

VARIETY	-- YIELD (BU/AC) -- 1988	1987	1986	MEAN	TEST WT (LB/BU) 1988	1987	1986	MEAN	--- PCT LODGED --- 1988	1987	1986	MEAN	PLANT HEIGHT (IN) 1988	1987	1986	MEAN	-- PCT SURVIVAL -- 1988	1987	1986	MEAN	HEADING DATE 1988	1987	1986	MEAN
CARDINAL	109	62	.	85	59.8	52.0	.	55.9	0	48	.	24	44	44	.	44	100	100	.	100	05MAY	03MAY		04MAY
SALUDA	108	73	45	75	63.3	47.2	58.2	56.2	0	80	0	27	40	40	31	37	100	100	54	85	30APR	01MAY	27APR	30APR
2555	107	.	.	107	61.1	.	.	61.1	0	.	.	0	41	.	.	41	100	.	.	100	29APR			29APR
PIKE	105	66	49	73	61.3	52.9	56.0	56.7	0	66	0	22	46	43	37	42	100	100	58	86	28APR	30APR	28APR	29APR
FLA 302	104	86	11	67	60.2	52.8	50.0	54.3	0	50	0	17	41	43	26	36	90	100	8	66	29APR	01MAY	01MAY	01MAY
BECKER	104	62	49	72	59.8	51.0	54.0	54.9	0	10	0	3	37	40	32	36	100	100	80	93	04MAY	04MAY	30APR	03MAY
SCOTTY	103	66	43	71	60.6	50.4	54.0	55.0	0	35	0	12	42	41	35	39	100	100	85	95	01MAY	03MAY	27APR	01MAY
2550	103	62	51	72	61.6	53.0	54.1	56.2	0	44	0	15	40	40	37	39	100	100	71	90	05MAY	03MAY	30APR	03MAY
TWAIN	100	56	30	62	62.5	50.6	54.8	56.0	0	23	0	8	43	43	35	40	100	100	31	77	27APR	29APR	28APR	28APR
LINCOLN	100	51	44	65	60.7	52.0	54.4	55.7	0	39	0	13	43	43	36	40	100	100	81	94	03MAY	02MAY	26APR	01MAY
COKER 833	99	.	.	99	60.8	.	.	60.8	0	.	.	0	42	.	.	42	100	.	.	100	01MAY			01MAY
PACER	99	.	.	99	60.9	.	.	60.9	0	.	.	0	41	.	.	41	100	.	.	100	01MAY			01MAY
TYLER	99	65	48	71	60.3	47.7	55.0	54.3	0	20	0	7	45	45	37	42	100	100	46	82	04MAY	03MAY	29APR	02MAY
CALDWELL	99	68	57	75	61.2	48.5	57.5	55.7	0	28	0	9	41	43	38	40	100	100	76	92	03MAY	02MAY	27APR	01MAY
COKER 9766	99	.	.	99	59.4	.	.	59.4	0	.	.	0	42	.	.	42	100	.	.	100	28APR			28APR
ADENA	98	65	32	65	60.4	49.6	53.4	54.5	0	13	0	4	40	40	30	36	100	100	29	76	01MAY	02MAY	29APR	01MAY
MASSEY	96	76	43	72	61.5	49.1	55.2	55.3	0	35	0	12	43	40	36	40	100	100	65	88	29APR	30APR	27APR	29APR
STEELE	96	.	.	96	58.6	.	.	58.6	0	.	.	0	41	.	.	41	100	.	.	100	29APR			29APR
ADDER	96	69	52	72	59.7	44.3	51.1	51.7	0	58	0	19	40	41	34	38	100	100	95	98	02MAY	03MAY	27APR	01MAY
COKER 916	95	60	39	65	61.2	51.1	53.0	55.1	0	93	0	31	40	41	32	37	100	100	75	92	24APR	27APR	23APR	25APR
CLARK	95	.	.	95	60.0	.	.	60.0	0	.	.	0	40	.	.	40	100	.	.	100	27APR			27APR
DYNASTY	95	.	.	95	60.8	.	.	60.8	0	.	.	0	41	.	.	41	100	.	.	100	04MAY			04MAY
COKER 9323	95	.	.	95	60.4	.	.	60.4	0	.	.	0	40	.	.	40	93	.	.	93	25APR			25APR
WHEELER	95	61	25	60	61.6	52.6	56.8	57.0	0	51	0	17	47	44	34	42	100	100	23	74	01MAY	02MAY	28APR	01MAY
2551	94	71	51	72	58.4	51.3	52.8	54.2	0	3	0	1	40	40	33	38	100	100	74	91	02MAY	02MAY	28APR	01MAY
KEISER	94	.	.	94	59.7	.	.	59.7	0	.	.	0	46	.	.	46	100	.	.	100	29APR			29APR
COKER 9877	93	.	.	93	59.8	.	.	59.8	0	.	.	0	41	.	.	41	89	.	.	89	02MAY			02MAY
ABE	89	61	37	62	62.8	50.0	55.0	55.9	0	55	0	18	44	41	34	40	100	100	85	95	01MAY	02MAY	27APR	30APR
HART	88	41	44	58	61.2	52.5	52.9	55.5	0	34	0	11	45	40	36	40	100	100	63	88	01MAY	02MAY	29APR	01MAY
COMPTON	87	59	50	65	62.3	47.7	55.6	55.2	0	51	0	17	41	40	34	38	100	100	90	97	03MAY	03MAY	28APR	02MAY
ARTHUR	87	60	43	63	61.2	51.6	57.1	56.6	0	31	0	10	46	42	38	42	100	100	83	94	01MAY	01MAY	26APR	30APR
COKER 9733	85	.	.	85	61.7	.	.	61.7	0	.	.	0	45	.	.	45	89	.	.	89	27APR			27APR
TRAVELER	84	.	.	84	61.2	.	.	61.2	0	.	.	0	38	.	.	38	85	.	.	85	23APR			23APR
MAGNUM	82	74	.	78	61.6	55.6	.	58.6	0	10	.	5	40	40	.	40	100	100	.	100	01MAY	30APR		01MAY
DOUBLECROP	64	59	25	49	62.6	58.6	55.4	58.9	0	50	0	17	43	42	38	41	100	100	79	93	23APR	24APR	19APR	22APR
MEAN	96	64	41	78	60.9	51.0	54.6	57.3	0	40	0	9	42	41	34	40	98	100	64	91	30APR	01MAY	27APR	30APR

CV= 7.3%
LSD(0.05)= 10 BU/A

*Location was Franklin

Table 9.—Wheat Performance Trials for North Central Region, 1986-1988.

VARIETY	-- YIELD (BU/AC) -- 1988	1987	1986	MEAN	TEST WT (LB/BU) 1988	1987	1986	MEAN	--- PCT LODGED --- 1988	1987	1986	MEAN	PLANT HEIGHT (IN) 1988	1987	1986	MEAN	-- PCT SURVIVAL -- 1988	1987	1986	MEAN
2555	85	.	.	85	60.4	.	.	60.4	0	.	.	0	35	.	.	35	100	.	.	100
PACER	82	.	.	82	60.1	.	.	60.1	0	.	.	0	35	.	.	35	100	.	.	100
COKER 833	79	.	.	79	59.7	.	.	59.7	0	.	.	0	36	.	.	36	100	.	.	100
TWAIN	77	63	23	54	62.7	57.3	48.0	56.0	0	0	0	0	35	37	29	34	100	100	43	81
BECKER	76	63	33	57	58.2	52.9	51.5	54.2	0	0	0	0	31	31	25	29	100	100	50	83
CLARK	74	.	.	74	60.4	.	.	60.4	0	.	.	0	35	.	.	35	100	.	.	100
CARDINAL	71	57	.	64	58.3	55.9	.	57.1	0	0	.	0	35	36	.	35	100	100	.	100
2550	71	59	37	56	60.5	54.5	52.0	55.7	0	0	0	0	32	34	27	31	100	100	63	88
MASSEY	70	60	36	56	59.9	56.1	53.4	56.5	0	0	0	0	36	37	29	34	100	100	64	88
DYNASTY	69	.	.	69	60.5	.	.	60.5	0	.	.	0	34	.	.	34	100	.	.	100
KEISER	69	.	.	69	60.5	.	.	60.5	0	.	.	0	39	.	.	39	100	.	.	100
STEELE	69	.	.	69	58.1	.	.	58.1	0	.	.	0	32	.	.	32	100	.	.	100
TYLER	69	53	31	51	60.2	54.3	50.4	55.0	0	0	0	0	34	36	28	33	100	100	46	82
COKER 9766	68	.	.	68	58.4	.	.	58.4	0	.	.	0	34	.	.	34	100	.	.	100
COKER 9877	67	.	.	67	58.9	.	.	58.9	0	.	.	0	33	.	.	33	100	.	.	100
HART	65	54	34	51	60.9	55.2	49.2	55.1	0	0	0	0	36	39	27	34	100	100	43	81
LINCOLN	64	63	43	57	60.3	57.5	55.0	57.6	0	0	0	0	34	38	30	34	100	100	64	88
PIKE	64	40	14	39	60.2	52.5	51.0	54.6	0	0	0	0	33	35	25	31	100	100	24	75
2551	63	56	27	48	57.0	53.7	45.8	52.2	0	0	0	0	30	31	27	30	100	100	56	85
COKER 9323	63	.	.	63	58.0	.	.	58.0	0	.	.	0	30	.	.	30	100	.	.	100
COKER 916	62	53	21	46	60.8	55.0	49.4	55.1	0	0	0	0	30	31	25	29	100	100	51	84
COMPTON	62	56	30	50	61.8	56.2	55.3	57.8	0	0	0	0	34	35	28	32	100	100	73	91
COKER 9733	62	.	.	62	62.4	.	.	62.4	0	.	.	0	37	.	.	37	100	.	.	100
WHEELER	61	55	16	44	62.1	56.8	42.8	53.9	0	0	0	0	36	41	27	34	100	100	16	72
CALDWELL	61	49	36	49	61.1	55.4	52.7	56.4	0	0	0	0	32	33	28	31	100	100	69	90
DOUBLECROP	61	53	6	40	63.1	58.0	46.4	55.8	0	0	0	0	36	35	24	32	100	100	65	88
ADENA	60	57	14	44	56.2	55.9	46.0	52.7	0	0	0	0	29	32	23	28	100	100	24	75
ADDER	59	50	36	48	56.2	54.3	53.1	54.5	0	0	0	0	32	34	26	31	100	100	85	95
SALUDA	58	52	17	42	61.6	56.7	47.2	55.2	0	0	0	0	29	32	23	28	100	100	31	77
FLA 302	55	57	7	40	58.2	55.9	46.6	53.6	0	0	0	0	31	36	24	30	100	100	9	70
SCOTTY	55	53	31	46	58.9	57.0	52.8	56.2	0	0	0	0	31	35	27	31	100	100	68	89
TRAVELER	53	.	.	53	58.9	.	.	58.9	0	.	.	0	32	.	.	32	88	.	.	88
ABE	52	47	33	44	60.8	50.7	52.8	54.8	0	0	0	0	33	36	28	32	100	100	60	87
ARTHUR	49	44	31	41	61.1	54.8	54.0	56.6	0	0	0	0	35	38	29	34	100	100	66	89
MAGNUM	46	50	.	48	58.9	56.4	.	57.6	0	0	.	0	29	31	.	30	100	100	.	100
MEAN	65	54	27	56	59.9	55.3	50.3	56.9	0	0	0	0	33	35	27	32	100	100	51	90

CV= 11.5%
LSD(0.05)= 10.6 BU/A

Table 10.—Disease Ratings of Wheat Varieties, 1988.[1]

VARIETY[2]	LEAF RUST[3]	LEAF BLOTCH[3]	GLUME BLOTCH[3]	POWDERY MILDEW[3]	WSSMV[4]
ABE	S	VS	MS	S	S
ARTHUR	S	MS	MS	S	S
DOUBLECROP	S	MS	MS	VS	S
2550	MS	S	S	MS	MS
CALDWELL	MR	VS	S	VS	S
SCOTTY	MR	MS	MS	MS	MS
WHEELER	S	MS	MS	S	S
TYLER	VS	MS	MS	S	MR
HART	S	VS	MS	VS	R
COKER 916	MR	S	VS	MS	MS
ADENA	S	VS	S	MS	R
PIKE	S	VS	S	VS	S
MASSEY	VS	MS	MS	MR	R
COKER 833	MS	S	--	MR	--
SALUDA	MS	MR	MS	MS	VS
COMPTON	MR	MS	VS	S	MS
ADDER	R	S	MS	MR	MS
FLA 302	R	MS	MS	MS	VS
TRAVELER	MR	MS	--	MR	--
CARDINAL	MS	R	MS	VS	MR
DYNASTY	S	MS	--	MS	--
MAGNUM	S	VS	MS	MS	S
TWAIN	MR	S	S	MR	MR
STEELE	MS	MS	--	S	--
CLARK	MS	MS	--	MS	--
LINCOLN	MS	MS	MS	MS	MR
2555	MR	S	--	VS	--
PACER	MS	VS	--	MR	--
BECKER	S	MS	MS	VS	R
2551	MS	MS	MS	MR	MR
COKER 9323	MR	S	--	MS	--
COKER 9766	MR	VS	--	MR	--
COKER 9877	R	MS	--	MS	--
COKER 9733	R	S	--	MR	--
KEISER	MR	MS	--	MS	--

1
VS=Very susceptible
S= Susceptible
MS= Moderately susceptible
R= Resistant
MR= Moderately Resistant
(--)= Insufficient opportunity to rate in presence of disease

2
Ratings of newly released varieties based on 1 yr. and 1 location.

3
Based on disease progress and final disease level.

4
Wheat spindle streak mosaic virus.

Table 11.—Characteristics of Barley Varieties Tested in 1988.

VARIETY	PROTECTED	SOURCE	RELEASE DATE	YIELD (BU/A)	TEST WEIGHT (LB/BU)	LODGING (%)	PLANT HEIGHT (IN.)	SURVIVAL (%)	HEADING DATE
PIKE	YES	INDIANA	1975	103	48.2	11.6	35.2	98.4	22APR88
KY79-73	NO	KY.BREEDER SEED	N.A.	102	48.1	22.5	37.8	96.9	23APR88
WYSOR	NO	VIRGINIA	1985	98.5	47.0	17.8	38.6	96.3	25APR88
KY79-44	NO	KY.BREEDER SEED	N.A.	94.9	47.5	21.9	38.0	96.9	27APR88
RAY	NO	OHIO	1986	89.3	48.4	21.3	43.3	94.7	28APR88
BARSOY	NO	KENTUCKY	1966	89.0	49.2	21.3	36.6	92.8	16APR88

CV=12.9%
LSD(0.05)= 9 BU/A

Table 12.—Barley Performance Trials for Western Coal Field Region, 1985, 1987, 1988.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN
PIKE	102	95	54	84	50.7	47.2	40.2	46.0	0	0	79	26	31	38	35	34	100	100	90	97	19APR	20APR	23APR	21APR
WYSOR	95	109	77	94	46.7	45.4	40.5	44.2	0	0	10	3	37	43	38	39	94	100	98	97	23APR	23APR	27APR	24APR
KY79-73	93	101	60	85	50.1	44.2	42.4	45.6	0	0	65	22	35	39	37	37	93	100	94	95	20APR	21APR	24APR	22APR
KY79-44	93	110	63	89	49.0	45.6	42.4	45.7	0	0	31	10	35	42	36	37	95	100	94	96	25APR	24APR	28APR	26APR
BARSOY	77	95	51	74	49.3	48.8	40.6	46.2	0	0	55	18	32	38	36	35	80	100	94	91	14APR	16APR	19APR	16APR
RAY	75	98	.	87	47.1	49.4	.	48.2	0	0	.	0	42	45	.	43	86	100	.	93	26APR	26APR		26APR
MEAN	89	101	61	85	48.8	46.8	41.2	46.0	0	0	48	13	35	41	36	38	91	100	94	95	21APR	22APR	24APR	22APR

CV= 8.7%
LSD(0.05)= 11.1 BU/A

Table 13.—Barley Performance Trials for Bluegrass Region, 1985, 1987, 1988.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN
WYSOR	101	123	77	100	48.8	44.8	44.8	46.1	3	3	70	25	39	43	37	40	91	96	96	95	02MAY	30APR	29APR	30APR
KY79-73	98	113	94	102	51.4	45.8	45.3	47.5	0	8	94	34	40	44	34	39	95	96	96	96	29APR	29APR	26APR	28APR
RAY	92	112	.	102	50.0	42.7	.	46.3	3	8	.	5	46	51	.	49	93	95	.	94	02MAY	03MAY		03MAY
PIKE	89	111	92	98	51.3	43.7	45.6	46.9	4	13	100	39	37	41	33	37	94	96	99	96	28APR	28APR	26APR	27APR
KY79-44	87	133	93	105	49.1	45.1	43.9	46.0	3	4	95	34	39	47	34	40	93	100	100	98	04MAY	01MAY	29APR	01MAY
BARSOY	86	126	86	99	53.2	43.8	47.0	48.0	1	0	99	33	38	43	34	38	91	98	96	95	24APR	23APR	24APR	23APR
MEAN	92	120	88	101	50.6	44.3	45.3	46.8	2	6	92	28	40	45	34	40	93	97	98	95	30APR	29APR	27APR	27APR

CV= 10.6%
LSD(0.05)= 14.2 BU/A

Table 14.—Barley Performance Trials for Southern Region*, 1985, 1987, 1988.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN	1988	1987	1985	MEAN
KY79-73	106	108	66	93	42.3	47.1	47.3	45.6	90	0	78	56	40	38	36	38	100	100	86	95	24APR	21APR	28APR	24APR
PIKE	99	97	64	86	40.6	48.7	46.3	45.2	43	0	78	40	38	37	35	36	100	100	84	95	23APR	20APR	26APR	23APR
WYSOR	98	108	80	95	46.3	44.5	45.8	45.5	69	0	74	48	42	40	36	39	100	100	70	90	25APR	23APR	02MAY	28APR
KY79-44	93	107	56	85	41.8	46.7	46.8	45.1	85	0	94	60	39	40	34	38	100	100	86	95	26APR	24APR	01MAY	28APR
BARSOY	90	93	65	83	42.5	45.7	47.1	45.1	84	0	34	39	39	37	36	37	100	100	66	89	18APR	19APR	22APR	21APR
RAY	79	106	.	92	47.6	37.8	.	42.7	83	0	.	41	42	44	.	43	100	100	.	100	29APR	25APR		28APR
MEAN	94	103	66	89	43.5	45.1	46.7	44.9	75	0	71	47	40	39	35	39	100	100	79	94	24APR	22APR	28APR	24APR

CV= 13.2%
LSD= 18.2 BU/A

*Location was Princeton, limestone soil.

Table 14A.—Barley Performance Trials for Southern Tier Region*, 1986-1988.

VARIETY	-- YIELD (BU/AC) --				TEST WT (LB/BU)				--- PCT LODGED ---				PLANT HEIGHT (IN)				-- PCT SURVIVAL --				HEADING DATE			
	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN	1988	1987	1986	MEAN
PIKE	122	76	38	78	50.4	38.6	46.6	45.2	0	96	5	34	35	39	33	36	100	100	78	93	17APR	21APR	14APR	18APR
KY79-73	112	88	61	87	48.8	43.8	46.1	46.2	0	93	10	34	37	39	36	37	100	100	73	91	18APR	20APR	16APR	18APR
RAY	111	95	.	103	48.8	46.9	.	47.8	0	31	.	16	43	43	.	43	100	100	.	100	23APR	23APR		24APR
KY79-44	107	98	67	91	50.2	43.4	44.2	45.9	0	73	6	26	39	40	35	38	100	100	76	92	22APR	21APR	20APR	21APR
BARSOY	104	75	24	68	52.0	42.6	46.6	47.1	0	76	0	25	37	39	32	36	100	100	26	75	10APR	16APR	12APR	13APR
WYSOR	99	106	68	91	46.4	42.6	48.0	45.7	0	71	1	24	36	43	38	39	100	100	80	93	19APR	22APR	18APR	20APR
MEAN	109	90	51	86	49.4	43.0	46.3	46.3	0	73	5	27	38	40	35	38	100	100	67	91	18APR	21APR	16APR	18APR

CV= 16.0%
LSD(0.05)= 26.3 BU/A

*Location was Franklin.

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