Progress Report 405

1998 Kentucky Small Grain Variety Trials

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In 1998, Kentucky farmers harvested 25.9 million bushels of soft red winter wheat produced on 550,000 acres. The average yield of 47 bu/a was 7 bushels less than the 1997 yield. Barley yields were 63 bu/a, 12 bushels less than the 1997 yields.

Small grain performance tests were conducted in six of the seven agro-climatic 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.

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 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.

Experimental Methods

Beginning in 1998, varieties were evaluated under both conventional and no-till cultural practices. No-till tests were grown at Russellville and Shelbyville in addition to the conventional tests which were grown at all locations.

Table 1—Small Grain Harvested Acreage and Yields in Kentucky, 1996-1998.*

	1998		1997		1996	
Crop	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A
Wheat	550	47	500	54	530	53
Barley	8	63	14	75	20	74

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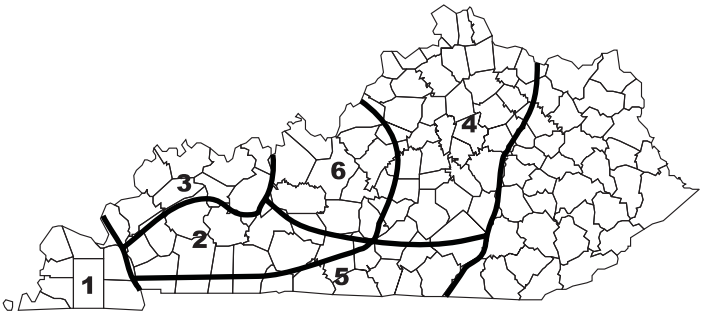

Figure 1—Agro-climatic Regions of Kentucky Small Grain Variety Trials.

Region	1998 Location	Cooperator	Crop Tested
1. Purchase	Hickman	Joe & Henry Sanger	Wheat
2. Western Coal Field	Princeton	Research and Education Center	Barley, Wheat
3. Ohio Valley	Henderson	David Alexander	Wheat
4. Bluegrass	Lexington	Kentucky Agricultural Experiment Station	Barley, Wheat
5. Southern Tier	Bowling Green	Western Kentucky University Farm	Barley, Wheat
	Russellville	Don Halcomb	Barley, Wheat
6. North Central	Shelbyville	Mike Ellis	Wheat

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The plots were planted with specially built multi-row conventional and no-till cone seeders. Conventional test plots consisted of six rows to form a plot 4 feet wide and 15 feet long, which was later trimmed to 10 feet in length. No-till plots consisted of 7 rows to form a plot 4.5 feet wide and 40 feet long which was later trimmed to 20 feet in length. Each variety was grown in four replications, and the data presented are the average responses from the four replications. Plots were harvested with a small plot combine. Planting dates of all trials for the past three 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 give a more accurate picture of varietal performance than do annual data.

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 three-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 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 percent lodged does not imply that only 50 percent 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.

1998 Test Conditions

Favorable weather during October allowed for timely seeding of wheat and barley variety trials. November weather was unseasonably cool for the first three weeks and very mild the last week, with normal precipitation. December and January were very mild with below-normal precipitation. February continued very mild with below-normal precipitation. The trials came through the very mild winter with no winterkill. Temperatures suddenly dropped across the state on March 12 into the single digits, resulting in severe freezedown of vegetative growth at some locations. Injury was variable depending on planting date and variety. The condition of the tests improved markedly as the season progressed.

Disease infestations were quite variable among locations. Disease ratings were made for mildew, Septoria leaf blotch, Septoria glume blotch, rust, and wheat spindle streak mosaic virus. These ratings are presented in Table 11. The Russellville conventional test and Shelbyville no-till test were treated with fungicides to control fungal diseases. All other tests were untreated so varieties could be rated for disease resistance.

Table 2—Region, Location, Preceding Crop, and Planting Dates of Kentucky Small Grain Trials, 1996-1998.

			Preceding		Planting Date		
Region	**Location**		**Crop**	**Crop**	**1998**	**1997**	**1996**
Purchase	Mayfield	1996	Corn	Wheat	10/10		11/21
	Hickman	1998	Corn	Wheat			
Ohio Valley	Owensboro	1996	Corn	Wheat	10/16	10/17	10/23
	Henderson	1997-98	Corn	Wheat			
Bluegrass	Lexington		Corn	Barley	10/16	10/21	10/13
				Wheat	10/15	10/17	10/17
Southern Tier	Hopkinsville	1996-97	Corn	Barley	10/8	10/16	10/18
				Wheat	10/8	10/16	10/18
	Russellville	1998	Corn	Barley			
				Wheat			
	Bowling Green	1997		Barley		10/12	
				Wheat		10/12	
Western Coal Field	Princeton		Fallow	Barley	10/17	10/8	10/26
				Wheat	10/17	10/8	10/26
North Central	Hardinsburg	1996	Corn	Wheat	10/2	10/15	10/17
	Shelbyville	1997-98	Corn	Wheat			

Small Grain Varieties for 1999

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 wheat and barley varieties are summarized in Tables 3 and 14a respectively.

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 3-10. No-till varietal performance is presented in Tables 10 and 11.

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 that 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 1998.

VARIETY	PROTECTED	SOURCE	RELEASE DATE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	LODGING (%)	PLANT HEIGHT (IN.)	SURVIVAL (%)	HEADING DATE
2552	Yes	Pioneer Hi Bred Int'l	1994	56.7	54.9	5.6	35.3	100.0	2-MAY
2540	Yes	Pioneer Hi Bred Int'l	1995	56.0	52.0	30.4	35.7	100.0	1-MAY
HYTEST W9850	Yes	Agribiotech,Inc.	1998	55.3	52.0	10.6	40.0	100.0	2-MAY
COKER 9663	Yes	Northrup King	1996	54.8	55.3	22.7	39.0	100.0	2-MAY
AGRIPRO PATTON	Yes	Agripro Seeds, Inc.	1998	54.1	51.2	16.7	35.9	100.0	30-APR
GLORY	Yes	Ohio	1994	53.5	52.9	7.7	35.1	100.0	30-APR
KAS JUSTICE	Yes	Kentucky American Seeds	1995	52.2	51.6	14.2	36.6	100.0	1-MAY
BECK 103	Yes	Beck's Hybrids	1997	52.0	52.3	17.9	36.1	100.0	29-APR
COKER 9474	Yes	Novartis Seeds, Inc.	1998	50.8	56.1	15.2	35.1	100.0	29-APR
25R26	Yes	Pioneer Hi Bred Int'l	1998	50.4	50.0	7.5	33.5	100.0	1-MAY
AGRIPRO ELKHART	Yes	Agripro Biosciences	1995	49.9	55.2	9.6	36.6	100.0	30-APR
PATTERSON	Yes	Indiana	1994	49.8	52.0	9.6	38.2	100.0	29-APR
25W33	Yes	Pioneer Hi Bred Int'l	1998	49.7	49.2	14.8	33.9	100.0	30-APR
DB 494W	Yes	Diener Seeds	1998	49.3	49.9	30.2	36.5	100.0	29-APR
2568	Yes	Pioneer Hi Bred Int'l	1995	48.7	49.0	12.1	33.9	100.0	29-APR
KAS PATRIOT	Yes	Kentucky American Seeds	1994	48.3	50.0	15.0	36.6	100.0	30-APR
25R57	Yes	Pioneer Hi Bred Int'l	1996	48.1	51.4	22.5	35.9	100.0	28-APR
DB 555W	Yes	Diener Seeds	1998	47.3	50.3	30.0	37.2	100.0	30-APR
TERRA SR 211	Yes	Terra Industries	1997	46.9	49.6	19.0	36.5	100.0	30-APR
TERRA Exp 215	Yes	Terra Industries	1998	46.8	53.4	28.5	39.0	100.0	30-APR
FFR 558W	Yes	Southern States Coop.	1997	46.5	52.9	5.4	36.8	100.0	1-MAY
VERNE	Yes	Kentucky	1990	46.5	51.3	15.2	39.0	100.0	1-MAY
AGRIPRO MASON	Yes	Agripro Seeds, Inc.	1995	46.1	52.2	13.3	35.4	100.0	29-APR
ROANE	Yes	Virginia	1998	45.9	53.7	36.5	33.3	100.0	1-MAY
TERRA Exp 216	Yes	Terra Industries	1998	45.9	48.4	32.7	37.3	100.0	30-APR
TERRA SR 204	Yes	Terra Industries	1997	45.8	52.5	18.8	37.6	100.0	1-MAY
FFR-exp 332	Yes	Southern States Coop.	1998	45.5	52.4	13.5	37.8	100.0	4-MAY
EXSEGEN RUTH	Yes	Miles Farm Supply	1998	44.9	49.7	19.0	36.5	100.0	1-MAY
AGRIPRO FOSTER + GAUCHO	Yes	Agripro Seeds, Inc.	1998	44.9	51.0	8.8	35.2	100.0	2-MAY
MADISON	Yes	Virginia	1990	43.5	49.6	20.0	36.8	100.0	30-APR
CLARK	Yes	Indiana	1988	42.2	50.8	22.3	36.8	100.0	26-APR
FFR 522 W	Yes	Southern States Coop.	1998	42.1	51.5	25.8	33.6	100.0	30-APR
ERNIE	Yes	Missouri	1994	41.4	51.5	46.3	32.0	100.0	30-APR
AGRIPRO FOSTER	Yes	Agripro Biosciences	1996	41.2	50.6	6.0	34.6	100.0	1-MAY
FFR-exp 1606	Yes	Southern States Coop.	1998	41.1	50.0	39.8	30.8	100.0	1-MAY
WAKEFIELD	Yes	Virginia	1990	40.5	48.4	17.9	37.6	100.0	4-MAY
EXSEGEN ESTHER	Yes	Miles Farm Supply	1998	40.3	49.7	31.7	35.0	100.0	29-APR
KY86C-61-8	Yes	Kentucky	1995	39.5	50.7	26.7	36.1	100.0	30-APR
26R46	Yes	Pioneer Hi Bred Int'l	1998	39.4	48.4	14.8	34.8	100.0	1-MAY
BECKER	Yes	Ohio	1985	38.4	49.6	14.0	35.1	100.0	2-MAY
CALDWELL	Yes	Indiana	1980	38.2	48.3	21.5	37.3	100.0	1-MAY
JACKSON	Yes	Virginia	1993	37.7	50.0	46.0	34.4	100.0	1-MAY
COKER 9803	Yes	Northrup King	1990	35.6	51.4	37.9	32.1	100.0	1-MAY
COKER 9543	Yes	Northrup King	1990	35.2	47.8	20.0	31.8	100.0	1-MAY
POCAHONTAS	Yes	Virginia	1996	35.0	47.3	32.9	32.6	100.0	29-APR
COKER 9704	Yes	Northrup King	1997	34.4	51.7	41.9	31.9	100.0	1-MAY
FFR 555 W	Yes	Southern States Coop.	1990	33.5	44.6	16.3	34.4	100.0	1-MAY
FFR 523 W	Yes	Southern States Coop.	1995	32.5	43.9	21.0	31.1	100.0	30-APR

MEAN = 44.7 BU/A
CV = 15.5
LSD(0.05) = 3.3

TABLE 3a AVERAGE PERFORMANCE OF WHEAT VARIETIES TESTED IN 1997-1998.

VARIETY	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	LODGING (%)	PLANT HEIGHT (IN.)	SURVIVAL (%)	HEADING DATE-1998
2552	65.0	57.0	2.8	36.1	99.6	2-MAY
2540	63.7	54.0	15.2	36.8	99.7	1-MAY
COKER 9663	61.0	56.1	12.8	40.2	99.0	2-MAY
GLORY	59.1	54.3	5.9	35.8	100.0	30-APR
25R26	57.1	52.0	4.0	34.4	100.0	1-MAY
2568	56.0	52.1	6.0	34.9	100.0	29-APR
KAS JUSTICE	56.0	53.2	7.1	37.3	99.5	1-MAY
25R57	55.9	53.7	11.3	36.3	99.3	28-APR
PATTERSON	55.6	54.7	4.8	38.6	97.3	29-APR
AGRIPRO ELKHART	55.4	56.7	5.0	37.6	98.9	30-APR
BECK 103	55.1	53.6	9.6	36.3	99.0	29-APR
VERNE	53.9	53.8	9.2	40.0	100.0	1-MAY
MADISON	53.1	52.2	12.6	36.9	100.0	30-APR
KAS PATRIOT	53.0	52.6	8.5	36.5	98.2	30-APR
FFR 558W	51.8	55.0	2.7	37.7	99.4	1-MAY
CLARK	51.2	53.1	11.1	37.0	100.0	26-APR
TERRA SR 211	51.1	52.0	9.5	36.2	95.1	30-APR
WAKEFIELD	50.9	51.9	9.4	38.3	98.5	4-MAY
TERRA SR 204	50.4	55.0	10.8	38.2	99.0	1-MAY
AGRIPRO FOSTER	50.3	53.4	3.0	36.1	99.8	1-MAY
KY86C-61-8	49.3	53.3	13.8	36.5	99.6	30-APR
BECKER	48.5	51.5	7.0	35.1	100.0	2-MAY
JACKSON	48.0	52.7	23.6	35.4	97.4	1-MAY
ERNIE	47.1	53.4	25.8	32.2	98.5	30-APR
CALDWELL	46.0	51.2	10.7	37.8	98.3	1-MAY
POCAHONTAS	46.0	51.7	18.0	32.9	99.2	29-APR
COKER 9803	45.1	54.9	19.2	32.7	99.6	1-MAY
COKER 9704	44.4	54.8	20.9	32.4	99.3	1-MAY
FFR 555 W	43.6	48.8	8.1	34.9	98.1	1-MAY
COKER 9543	42.5	51.4	12.7	32.1	100.0	1-MAY
FFR 523 W	39.1	48.0	10.5	30.6	97.5	30-APR

TABLE 3b AVERAGE PERFORMANCE OF WHEAT VARIETIES TESTED IN 1996-98.

VARIETY	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	LODGING (%)	PLANT HEIGHT (IN.)	SURVIVAL (%)	HEADING DATE-1998
2540	63.7	54.7	10.1	35.6	81.9	1-MAY
2552	63.7	57.1	1.9	35.0	82.4	2-MAY
COKER 9663	60.1	56.5	8.5	39.3	79.4	2-MAY
2568	57.7	53.4	4.0	33.9	80.4	29-APR
GLORY	57.3	55.2	4.0	34.8	81.2	30-APR
PATTERSON	56.6	55.3	3.2	37.3	81.7	29-ARP
AGRIPRO ELKHART	56.3	57.1	3.3	36.7	79.4	30-APR
KAS JUSTICE	55.9	54.6	4.7	36.5	85.7	1-MAY
MADISON	54.5	53.7	8.4	36.3	82.0	30-APR
VERNE	53.3	54.6	6.2	38.9	79.7	1-MAY
KAS PATRIOT	53.1	54.1	5.7	35.2	78.7	30-APR
KY86C-61-8	52.4	54.4	9.2	35.7	80.4	30-APR
CLARK	51.9	54.1	7.4	36.1	81.9	26-APR
AGRIPRO FOSTER	49.8	53.9	2.0	34.8	78.0	1-MAY
BECKER	49.0	52.6	4.7	33.8	80.3	2-MAY
WAKEFIELD	48.6	52.7	6.3	37.0	74.0	4-MAY
ERNIE	45.4	54.2	17.2	31.2	72.7	30-APR
JACKSON	44.8	53.6	15.8	33.7	69.6	1-MAY
POCAHONTAS	44.6	52.7	12.0	32.0	72.0	29-APR
CALDWELL	44.5	52.8	7.2	36.4	72.1	1-MAY
FFR 555 W	43.7	50.5	5.4	33.3	73.6	1-MAY
COKER 9543	43.6	53.2	8.5	31.6	78.3	1-MAY
FFR 523 W	42.5	50.5	7.0	29.6	76.7	30-APR
COKER 9803	42.1	55.6	12.8	31.4	72.2	1-MAY

TABLE 4 WHEAT PERFORMANCE TRIALS FOR PURCHASE REGION*, 1995, 1996, 1998.

VARIETY	YIELD (BU/AC) 1998	1996	1995	MEAN	TEST WT (LB/BU) 1998	1996	1995	MEAN	PCT LODGED 1998	1996	1995	MEAN	PCT SURVIVAL 1998	1996	1995	MEAN	PLANT HEIGHT (IN) 1998	HEADING DATE 1998
HYTEST W9850	68			68	55.2			55.2	9	0	0	3	100			100	41	25-APR
KAS JUSTICE	65	55		60	55.7	55.7		55.7	19	0	0	6	100	30		65	37	24-APR
TERRA Exp 216	62			62	52.2			52.2	30	0	0	10	100			100	38	23-APR
2540	61	55		58	55.6	56.0		55.8	60	0	0	20	100	30		65	37	23-APR
BECK 103	60			60	55.0			55.0	25	0	0	8	100			100	36	23-APR
DB 494W	60			60	54.1			54.1	30	0	0	10	100			100	37	22-APR
COKER 9663	58	45		52	55.5	56.5		56.0	21	0	0	7	100	16		58	39	29-APR
KAS PATRIOT	58	50	48	52	54.3	56.5	54.4	55.1	23	0	0	8	100	19	100	73	36	22-APR
COKER 9474	58			58	57.7			57.7	18	0	0	6	100			100	34	23-APR
FFR 558W	58			58	54.4			54.4	15	0	0	5	100			100	37	24-APR
GLORY	56	44	44	48	53.6	55.5	52.7	53.9	13	0	0	4	100	20	100	73	33	25-APR
DB 555W	55			55	54.5			54.5	38	0	0	13	100			100	37	23-APR
PATTERSON	55	50	45	50	57.1	54.4	55.4	55.6	20	0	0	7	100	24	100	75	38	23-APR
CALDWELL	54	34	41	43	53.3	53.7	53.7	53.6	11	0	0	4	100	9	100	70	38	24-APR
25R57	54			54	53.1			53.1	28	0	0	9	100			100	34	21-APR
TERRA SR 211	53			53	54.9			54.9	19	0	0	6	100			100	37	23-APR
2552	51	48	52	51	53.3	54.3	53.9	53.8	9	0	0	3	100	16	100	72	34	26-APR
AGRIPRO PATTON	51			51	51.4			51.4	61	0	0	20	100			100	36	24-APR
AGRIPRO ELKHART	50	53	57	53	55.4	56.8	58.2	56.8	33	0	0	11	100	15	100	72	35	24-APR
BECKER	50	42	44	45	52.8	52.1	53.8	52.9	6	0	0	2	100	21	100	74	35	25-APR
TERRA SR 204	50			50	53.3			53.3	50	0	0	17	100			100	38	25-APR
2568	48	52		50	52.3	54.4		53.4	30	0	0	10	100	18		59	33	24-APR
TERRA Exp 215	48			48	52.3			52.3	44	0	0	15	100			100	39	22-APR
25R26	46			46	53.2			53.2	5	0	0	2	100			100	31	25-APR
VERNE	46	40	54	46	54.6	52.6	52.4	53.2	6	0	0	2	100	13	100	71	37	24-APR
25W33	46			46	52.3			52.3	46	0	0	15	100			100	33	21-APR
FFR 522 W	44			44	54.3			54.3	36	0	0	12	100			100	32	25-APR
EXSEGEN RUTH	40			40	49.8			49.8	28	0	0	9	100			100	36	25-APR
AGRIPRO MASON	39	44		41	50.9	53.5		52.2	26	0	0	9	100	19		59	34	23-APR
AGRIPRO FOSTER + GAUCHO	39			39	52.5			52.5	29	0	0	10	100			100	34	26-APR
ERNIE	39	42	34	38	50.1	54.5	47.4	50.7	58	0	0	19	100	10	100	70	30	24-APR
MADISON	38	49	40	42	51.1	55.0	50.4	52.2	20	0	0	7	100	21	100	74	34	25-APR
26R46	38			38	52.1			52.1	55	0	0	18	100			100	34	28-APR
COKER 9543	37	40	48	42	47.7	55.7	53.2	52.2	20	0	0	7	100	14	100	71	31	26-APR
EXSEGEN ESTHER	37			37	49.4			49.4	59	0	0	20	100			100	34	24-APR
FFR-exp 1606	35			35	49.7			49.7	24	0	0	8	100			100	30	28-APR
FFR-exp 332	35			35	51.7			51.7	34	0	0	11	100			100	38	27-APR
CLARK	35	44	35	38	52.3	54.1	51.6	52.7	66	0	0	22	100	16	100	72	34	19-APR
ROANE	34			34	51.6			51.6	53	0	0	18	100			100	33	28-APR
AGRIPRO FOSTER	33	40	45	39	52.8	52.2	53.7	52.9	26	0	0	9	100	18	100	73	32	23-APR
WAKEFIELD	29	37	46	37	51.1	54.8	54.4	53.4	38	0	0	13	100	9	100	70	37	27-APR
COKER 9803	25	33	49	36	49.4	57.6	53.5	53.5	35	0	0	12	100	8	100	69	31	24-APR
POCAHONTAS	25	38		32	47.3	52.5		49.9	20	0	0	7	100	10		55	32	26-APR
COKER 9704	21			21	49.0			49.0	31	0	0	10	100			100	32	27-APR
KY86C-61-8	19	40	42	34	50.3	53.7	51.9	52.0	68	0	0	23	100	11	100	70	35	22-APR
Jackson	16	27	50	31	49.0	51.1	52.9	51.0	60	0	0	20	100	5	100	68	33	26-APR
FFR 555 W	15	28	47	30	44.8	52.0	51.0	49.3	59	0	0	20	100	10	100	70	32	27-APR
FFR 523 W	15	44	37	32	44.0	53.3	52.1	49.8	40	0	0	13	100	18	100	73	29	25-APR
MEAN	44	43	45	44	52.3	54.3	53.0	53.2	32	0	0	11	100	16	100	72	35	

CV = 24.6
LSD(0.05) = 12.4
* LOCATION: Fulton County
No test was planted in 1997.

TABLE 5 WHEAT PERFORMANCE TRIALS FOR OHIO VALLEY REGION*, 1996-1998.

VARIETY	YIELD (BU/AC) 1998	1997	1996	MEAN	TEST WT (LB/BU) 1998	1997	1996	MEAN	PCT LODGED 1998	1997	1996	MEAN	PCT SURVIVAL 1998	1997	1996	MEAN	PLANT HEIGHT (IN) 1998	HEADING DATE 1998
BECK 103	64	52		58	51.3	58.3		54.8	3	0	0	1	100	93		96	36	1-MAY
2552	64	69	64	65	55.5	60.3	58.2	58.0	5	0	0	2	100	100	28	76	34	2-MAY
ERNIE	61	42	33	45	52.6	59.7	54.9	55.7	16	0	0	5	100	90	7	66	32	29-APR
AGRIPRO ELKHART	61	51	57	56	54.6	60.7	59.4	58.2	8	0	0	3	100	90	29	73	38	30-APR
HYTEST W9850	60			60	51.9			51.9	3	0	0	1	100			100	42	4-MAY
PATTERSON	60	52	57	56	52.3	59.2	59.5	57.0	3	0	0	1	100	88	41	76	40	30-APR
GLORY	60	57	58	58	51.2	57.9	58.4	55.8	5	0	0	2	100	100	29	76	36	1-MAY
COKER 9663	59	61	63	61	54.2	59.8	59.3	57.8	23	0	0	8	100	96	31	76	40	1-MAY
AGRIPRO PATTON	59			59	48.3			48.3	6	0	0	2	100			100	36	30-APR
KAS JUSTICE	57	47	58	54	51.5	56.0	59.8	55.8	23	0	0	8	100	96	64	87	37	2-MAY
25R57	57	45		51	51.1	58.8		55.0	16	0	0	5	100	93		96	39	30-APR
AGRIPRO MASON	56		49	35	49.7		56.0	35.2	0	0	0	0	100		15	38	37	28-APR
25R26	56	62		59	47.3	55.1		51.2	5	0	0	2	100	100		100	34	3-MAY
DB 494W	56			56	49.2			49.2	25	0	0	8	100			100	38	30-APR
FFR-exp 332	56			56	52.2			52.2	6	0	0	2	100			100	37	4-MAY
COKER 9474	56			56	55.2			55.2	1	0	0	0	100			100	37	28-APR
KAS PATRIOT	55	51	53	53	50.2	57.4	58.8	55.5	8	0	0	3	100	95	30	75	37	2-MAY
AGRIPRO FOSTER + GAUCHO	55			55	49.2			49.2	3	0	0	1	100			100	35	3-MAY
TERRA SR 204	54	55		54	52.1	60.5		56.3	0	0	0	0	100	88		94	39	3-MAY
DB 555W	54			54	51.9			51.9	18	0	0	6	100			100	38	30-APR
CLARK	52	59	56	56	50.2	57.6	57.5	55.1	15	0	0	5	100	100	34	78	39	28-APR
TERRA SR 211	52	54		53	47.5	58.0		52.8	8	0	0	3	100	75		88	38	2-MAY
TERRA Exp 215	50			50	51.6			51.6	29	0	0	10	100			100	39	3-MAY
WAKEFIELD	50	64	43	52	48.4	59.2	56.7	54.8	3	0	0	1	100	85	13	66	38	4-MAY
JACKSON	50	60	38	49	48.8	58.6	57.4	54.9	16	0	0	5	100	100	8	69	36	29-APR
FFR 558W	50	51		50	52.9	58.3		55.6	0	0	0	0	100	93		96	37	4-MAY
EXSEGEN ESTHER	50			50	48.1			48.1	26	0	0	9	100			100	36	29-APR
MADISON	50	65	55	56	50.9	58.9	59.1	56.3	15	0	0	5	100	100	34	78	38	30-APR
25W33	50			50	46.8			46.8	4	0	0	1	100			100	34	2-MAY
26R46	49			49	47.6			47.6	0	0	0	0	100			100	35	29-APR
2568	49	61	53	54	48.0	57.5	56.7	54.1	9	0	0	3	100	100	19	73	34	30-APR
TERRA Exp 216	48			48	50.3			50.3	43	0	0	14	100			100	39	2-MAY
ROANE	47			47	50.8			50.8	20	0	0	7	100			100	34	2-MAY
POCAHONTAS	47	60	46	51	47.9	60.4	57.9	55.4	29	0	0	10	100	100	8	69	33	29-APR
AGRIPRO FOSTER	47	58	45	50	47.9	58.8	55.5	54.1	3	0	0	1	100	100	21	74	35	3-MAY
FFR 555 W	47	52	42	47	43.2	57.9	57.9	53.0	4	0	0	1	100	90	14	68	35	2-MAY
EXSEGEN RUTH	46			46	49.4			49.4	15	0	0	5	100			100	38	4-MAY
VERNE	46	67	50	54	47.4	59.2	57.1	54.6	43	0	0	14	100	100	19	73	39	1-MAY
FFR 522 W	45			45	48.4			48.4	25	0	0	8	100			100	35	30-APR
FFR 523 W	45	36	51	44	43.8	57.7	58.5	53.3	4	0	0	1	100	95	21	72	32	28-APR
KY86C-61-8	44	53	58	51	48.4	58.2	58.3	55.0	16	0	0	5	100	100	23	74	37	30-APR
FFR-exp 1606	43			43	46.8			46.8	46	0	0	15	100			100	29	1-MAY
2540	42	73	62	59	46.1	56.4	57.8	53.4	56	0	0	19	100	100	28	76	35	4-MAY
COKER 9803	41	63	23	42	50.9	60.6	58.6	56.7	36	0	0	12	100	100	4	68	33	30-APR
CALDWELL	40	40	48	43	48.4	56.9	58.7	54.7	0	0	0	0	100	93	14	69	39	4-MAY
COKER 9704	38	58		48	51.0	61.2		56.1	21	0	0	7	100	100		100	32	30-APR
BECKER	37	50	52	46	49.2	57.1	57.4	54.6	0	0	0	0	100	100	25	75	37	6-MAY
COKER 9543	37	55	38	43	44.5	59.2	57.6	53.8	5	0	0	2	100	100	19	73	31	30-APR
MEAN	51	55	50	52	49.7	58.6	57.9	55.4	14	0	0	5	100	95	23	73	36	

CV = 13.7
LSD(0.05) = 0.1
* LOCATION: Henderson County

TABLE 6 WHEAT PERFORMANCE TRIALS FOR BLUEGRASS REGION*, 1996-1998.

	YIELD (BU/AC)				TEST WT (LB/BU)				PCT LODGED				PCT SURVIVAL				PLANT HEIGHT (IN)	HEADING DATE
VARIETY	1998	1997	1996	MEAN	1998	1997	1996	MEAN	1998	1997	1996	MEAN	1998	1997	1996	MEAN	1998	1998
2552	75	62	77	71	56.9	58.8	58.2	58.0	0	0	0	0	100	100	63	88	37	10-MAY
2540	70	63	69	67	53.4	57.3	55.6	55.4	0	0	0	0	100	100	45	82	36	12-MAY
25W33	67			67	50.7			50.7	0	0	0	0	100			100	33	12-MAY
COKER 9663	67	53	67	62	56.0	56.6	56.5	56.4	0	0	0	0	100	100	69	90	41	11-MAY
HYTEST W9850	65			65	51.7			51.7	0	0	0	0	100			100	38	12-MAY
KY86C-61-8	65	53	81	66	53.5	57.5	58.2	56.4	0	0	0	0	100	100	81	94	37	9-MAY
AGRIPRO PATTON	65			65	52.8			52.8	0	0	0	0	100			100	38	9-MAY
25R26	64	57		60	50.2	53.7		52.0	0	0	0	0	100	100		100	32	11-MAY
GLORY	63	55	72	63	53.7	56.6	57.6	56.0	0	0	0	0	100	100	81	94	36	9-MAY
2568	61	54	78	64	50.5	56.9	55.5	54.3	0	0	0	0	100	100	54	85	36	6-MAY
FFR-exp 332	59			59	52.6			52.6	0	0	0	0	100			100	39	13-MAY
TERRA Exp 215	59			59	54.7			54.7	24	0	0	8	100			100	41	10-MAY
COKER 9474	58			58	57.4			57.4	3	0	0	1	100			100	35	10-MAY
WAKEFIELD	58	55	61	58	47.6	57.0	56.2	53.6	0	0	0	0	100	100	44	81	39	11-MAY
MADISON	58	55	70	61	48.6	55.9	57.0	53.8	3	0	0	1	100	100	78	93	38	8-MAY
EXSEGEN RUTH	58			58	51.3			51.3	11	0	0	4	100			100	37	10-MAY
AGRIPRO FOSTER + GAUCHO	57			57	53.0			53.0	0	0	0	0	100			100	35	12-MAY
VERNE	57	47	64	56	51.4	57.1	58.3	55.6	0	0	0	0	100	100	86	95	40	10-MAY
25R57	57	60		58	50.4	56.7		53.6	0	0	0	0	100	100		100	35	9-MAY
AGRIPRO FOSTER	56	52	64	57	50.4	56.5	53.7	53.5	0	0	0	0	100	100	61	87	36	11-MAY
TERRA SR 204	56	49		52	55.9	58.5		57.2	0	0	0	0	100	100		100	38	10-MAY
PATTERSON	56	55	63	58	51.0	57.8	54.7	54.5	0	0	0	0	100	100	68	89	37	9-MAY
ROANE	56			56	57.4			57.4	11	0	0	4	100			100	34	7-MAY
AGRIPRO MASON	55		59	38	53.4		56.0	36.5	19	0	0	6	100		55	52	36	7-MAY
JACKSON	54	44	49	49	51.5	58.1	53.1	54.2	63	0	0	21	100	100	18	73	35	10-MAY
AGRIPRO ELKHART	54	58	59	57	55.1	58.1	55.7	56.3	0	0	0	0	100	100	59	86	37	10-MAY
KAS PATRIOT	54	48	57	53	49.4	57.0	53.1	53.2	0	0	0	0	100	100	61	87	36	10-MAY
BECK 103	54	54		54	51.0	57.1		54.1	3	0	0	1	100	100		100	36	10-MAY
KAS JUSTICE	53	56	65	58	50.0	55.7	57.1	54.3	0	0	0	0	100	100	75	92	36	11-MAY
CLARK	53	41	57	50	53.8	55.0	55.8	54.9	0	0	0	0	100	100	58	86	38	6-MAY
FFR 558W	52	57		54	53.3	58.7		56.0	0	0	0	0	100	100		100	35	11-MAY
COKER 9704	52	42		47	56.1	58.5		57.3	46	0	0	15	100	100		100	33	7-MAY
COKER 9803	51	42	45	46	54.6	58.2	56.1	56.3	41	0	0	14	100	100	24	75	32	7-MAY
FFR 522 W	51			51	50.2			50.2	0	0	0	0	100			100	35	8-MAY
TERRA SR 211	51	49		50	51.1	55.9		53.5	5	0	0	2	100	100		100	37	10-MAY
DB 494W	51			51	49.9			49.9	6	0	0	2	100			100	36	10-MAY
BECKER	50	55	62	55	51.1	54.8	53.7	53.2	0	0	0	0	100	100	69	90	35	11-MAY
FFR 555 W	49	52	54	52	43.2	55.2	53.6	50.7	13	0	0	4	100	100	34	78	36	9-MAY
DB 555W	49			49	49.2			49.2	20	0	0	7	100			100	38	10-MAY
FFR-exp 1606	48			48	49.7			49.7	18	0	0	6	100			100	33	9-MAY
TERRA Exp 216	47			47	48.2			48.2	6	0	0	2	100			100	37	9-MAY
FFR 523 W	46	47	66	53	43.1	55.2	55.4	51.2	0	0	0	0	100	100	70	90	32	9-MAY
26R46	46			46	48.1			48.1	13	0	0	4	100			100	35	9-MAY
POCAHONTAS	42	49	39	43	48.3	56.8	52.4	52.5	18	0	0	6	100	100	26	75	32	8-MAY
COKER 9543	42	44	56	47	47.6	57.5	55.0	53.4	18	0	0	6	100	100	59	86	32	8-MAY
ERNIE	41	48	43	44	48.9	56.3	54.7	53.3	48	0	0	16	100	100	41	80	33	8-MAY
EXSEGEN ESTHER	41			41	50.8			50.8	0	0	0	0	100			100	34	7-MAY
CALDWELL	31	61	31	41	45.0	57.1	54.2	52.1	13	0	0	4	100	100	18	73	36	11-MAY
MEAN	55	52	60	56	51.3	56.8	55.5	54.6	8	0	0	3	100	100	56	85	36	

CV = 10.9
LSD(0.05) = 6.9
* LOCATION: Lexington, Spindletop farm

TABLE 7 WHEAT PERFORMANCE TRIALS FOR WESTERN COAL FIELD REGION*, 1996-1998.

VARIETY	YIELD (BU/AC) 1998	1997	1996	MEAN	TEST WT (LB/BU) 1998	1997	1996	MEAN	PCT LODGED 1998	1997	1996	MEAN	PCT SURVIVAL 1998	1997	1996	MEAN	PLANT HEIGHT (IN) 1998	HEADING DATE 1998
AGRIPRO ELKHART	47	64	69	60	55.1	59.0	59.7	57.9	0	0	0	0	100	100	34	78	37	27-APR
ROANE	46			46	55.5			55.5	0	0	0	0	100			100	32	30-APR
COKER 9663	44	78	72	65	56.2	57.5	58.7	57.5	3	0	0	1	100	100	34	78	38	29-APR
2552	44	77	64	62	52.3	59.0	57.3	56.2	3	0	0	1	100	100	48	83	35	29-APR
BECK 103	44	64		54	51.8	57.0		54.4	0	0	0	0	100	100		100	36	28-APR
COKER 9474	43			43	56.0			56.0	0	0	0	0	100			100	36	27-APR
2540	43	75	76	65	50.3	57.4	56.2	54.6	3	0	0	1	100	100	51	84	35	29-APR
DB 555W	41			41	49.9			49.9	0	0	0	0	100			100	37	29-APR
TERRA SR 211	40	52		46	49.8	55.4		52.6	0	0	0	0	100	100		100	36	29-APR
25R26	40	60		50	47.9	54.5		51.2	0	0	0	0	100	100		100	34	30-APR
DB 494W	39			39	48.6			48.6	0	0	0	0	100			100	36	29-APR
FFR-exp 1606	39			39	53.7			53.7	0	0	0	0	100			100	30	27-APR
ERNIE	39	57	54	50	53.7	56.9	57.8	56.1	0	0	0	0	100	100	19	73	32	27-APR
2568	38	73	65	59	48.5	56.2	55.5	53.4	0	0	0	0	100	100	41	80	33	27-APR
EXSEGEN RUTH	38			38	49.5			49.5	0	0	0	0	100			100	37	30-APR
GLORY	37	70	55	54	53.0	58.1	56.1	55.7	0	0	0	0	100	100	26	75	36	28-APR
TERRA Exp 216	37			37	48.5			48.5	0	0	0	0	100			100	37	29-APR
KAS PATRIOT	37	62	61	53	48.4	55.7	57.7	53.9	0	0	0	0	100	100	31	77	37	29-APR
KAS JUSTICE	36	64	64	55	48.7	56.4	57.0	54.0	0	0	0	0	100	100	43	81	37	1-MAY
PATTERSON	36	67	62	55	51.2	58.6	57.8	55.9	0	0	0	0	100	100	39	80	39	28-APR
VERNE	34	67	62	54	49.6	57.1	57.7	54.8	0	0	1	0	100	100	28	76	39	30-APR
MADISON	34	67	62	54	51.5	57.0	56.3	54.9	0	0	0	0	100	100	34	78	37	27-APR
AGRIPRO PATTON	34			34	49.9			49.9	0	0	0	0	100			100	34	28-APR
EXSEGEN ESTHER	34			34	50.5			50.5	0	0	0	0	100			100	35	26-APR
AGRIPRO FOSTER + GAUCHO	34			34	47.2			47.2	0	0	0	0	100			100	35	1-MAY
TERRA SR 204	33	49		41	48.2	58.1		53.2	0	0	0	0	100	100		100	37	29-APR
HYTEST W9850	33			33	48.5			48.5	0	0	0	0	100			100	40	2-MAY
JACKSON	32	62	51	48	50.8	56.3	56.5	54.5	19	0	0	6	100	100	16	72	33	28-APR
25R57	32	68		50	50.6	57.6		54.1	0	0	0	0	100	100		100	36	27-APR
FFR 558W	32	63		47	52.5	57.8		55.2	0	0	0	0	100	100		100	36	30-APR
TERRA Exp 215	31			31	52.9			52.9	0	0	0	0	100			100	39	30-APR
FFR 522 W	31			31	52.7			52.7	0	0	0	0	100			100	34	28-APR
CLARK	30	68	54	51	52.2	55.7	56.9	54.9	0	0	0	0	100	100	40	80	37	25-APR
FFR-exp 332	30			30	50.7			50.7	0	0	0	0	100			100	38	2-MAY
CALDWELL	30	57	51	46	48.0	55.1	58.2	53.8	0	0	0	0	100	100	14	71	38	29-APR
AGRIPRO MASON	30		55	28	50.9		54.9	35.3	0	0	0	0	100		30	43	34	28-APR
AGRIPRO FOSTER	29	63	53	48	48.9	56.8	54.5	53.4	0	0	0	0	100	100	23	74	36	1-MAY
WAKEFIELD	28	64	43	45	47.9	55.9	53.3	52.4	0	0	0	0	100	100	14	71	38	2-MAY
KY86C-61-8	27	72	61	53	49.0	56.8	57.1	54.3	0	0	0	0	100	100	38	79	34	28-APR
FFR 523 W	27	50	41	39	45.6	55.5	55.3	52.1	0	0	0	0	100	100	21	74	33	26-APR
POCAHONTAS	26	54	50	43	49.2	57.9	54.8	54.0	0	0	0	0	100	100	15	72	32	27-APR
25W33	26			26	44.7			44.7	0	0	0	0	100			100	34	29-APR
COKER 9704	25	55		40	52.6	59.4		56.0	0	0	0	0	100	100		100	29	30-APR
26R46	25			25	48.5			48.5	0	0	0	0	100			100	33	28-APR
COKER 9803	24	55	47	42	51.4	59.5	57.9	56.3	0	0	0	0	100	100	15	72	30	29-APR
BECKER	22	74	43	46	45.7	55.2	54.3	51.7	0	0	0	0	100	100	21	74	35	2-MAY
FFR 555 W	21	63	51	45	47.0	56.9	54.5	52.8	0	0	0	0	100	100	23	74	34	29-APR
COKER 9543	21	59	55	45	51.0	56.5	58.0	55.2	0	0	0	0	100	100	30	77	30	28-APR
MEAN	34	64	57	51	50.4	57.0	56.6	54.6	1	0	0	0	100	100	29	76	35	

CV = 16.2
LSD(0.05) = 6.3
* LOCATION: Princeton, limestone soil

TABLE 7a WHEAT PERFORMANCE TRIALS FOR SOUTHERN TIER REGION*, 1996-1998.

VARIETY	YIELD (BU/AC) 1998	1997	1996	MEAN	TEST WT (LB/BU) 1998	1997	1996	MEAN	PCT LODGED 1998	1997	1996	MEAN	PCT SURVIVAL 1998	1997	1996	MEAN	PLANT HEIGHT (IN) 1998	HEADING DATE 1998
2540	59	82	60	67	53.7	56.8	54.6	55.0	3	0	0	1	100	100	56	85	37	28-APR
KAS JUSTICE	56	75	48	60	54.3	56.4	58.1	56.3	3	0	0	1	100	100	65	88	38	26-APR
AGRIPRO PATTON	53			53	51.0			51.0	23	0	0	8	100			100	35	1-MAY
HYTEST W9850	53			53	51.8			51.8	4	0	0	1	100			100	40	29-APR
25W33	49			49	49.6			49.6	28	0	0	9	100			100	34	27-APR
COKER 9663	48	84	51	61	54.5	57.0	57.7	56.4	10	0	0	3	100	100	30	77	39	2-MAY
GLORY	48	86	48	61	52.6	58.1	57.7	56.1	3	0	0	1	100	100	36	79	35	27-APR
TERRA Exp 215	47			47	54.8			54.8	23	0	0	8	100			100	38	27-APR
2568	46	77	60	61	51.3	55.6	56.4	54.4	5	0	0	2	100	100	45	82	34	30-APR
DB 555W	45			45	50.8			50.8	20	0	0	7	100			100	38	27-APR
ROANE	45			45	51.6			51.6	64	0	0	21	100			100	33	2-MAY
EXSEGEN RUTH	45			45	48.4			48.4	9	0	0	3	100			100	36	30-APR
PATTERSON	44	72	66	61	50.9	58.2	57.4	55.5	3	0	0	1	100	100	61	87	38	25-APR
AGRIPRO MASON	44		37	27	54.0		55.5	36.5	0	0	0	0	100		11	37	37	27-APR
BECK 103	44	77		60	50.7	56.8		53.8	8	0	0	3	100	100		100	37	25-APR
COKER 9474	44			44	55.1			55.1	5	0	0	2	100			100	36	26-APR
FFR 558W	43	73		58	53.4	58.7		56.1	0	0	0	0	100	100		100	37	1-MAY
25R57	43	81		62	53.0	55.5		54.3	10	0	0	3	100	100		100	36	23-APR
VERNE	43	74	49	55	51.5	58.0	56.3	55.3	8	0	0	3	100	100	21	74	40	30-APR
AGRIPRO ELKHART	43	80	60	61	56.2	60.0	58.7	58.3	0	0	0	0	100	100	39	80	37	29-APR
DB 494W	43			43	48.4			48.4	30	0	0	10	100			100	37	25-APR
TERRA Exp 216	42			42	45.2			45.2	26	0	0	9	100			100	37	29-APR
FFR-exp 332	42			42	50.9			50.9	15	0	0	5	100			100	38	30-APR
WAKEFIELD	41	74	35	50	46.9	56.3	50.3	51.2	26	0	0	9	100	100	11	70	38	3-MAY
2552	41	85	58	61	54.0	59.7	58.8	57.5	3	0	0	1	100	100	53	84	36	5-MAY
AGRIPRO FOSTER + GAUCHO	41			41	52.6			52.6	0	0	0	0	100			100	36	1-MAY
CALDWELL	41	70	53	54	47.3	55.8	55.7	52.9	10	0	0	3	100	100	34	78	38	27-APR
25R26	40	88		64	51.3	55.3		53.3	23	0	0	8	100	100		100	33	30-APR
KAS PATRIOT	40	80	56	59	48.8	57.3	58.5	54.9	10	0	0	3	100	100	36	79	37	26-APR
AGRIPRO FOSTER	40	76	51	55	51.5	57.4	56.9	55.3	1	0	0	0	100	100	26	75	35	1-MAY
TERRA SR 211	40	83		61	44.9	57.2		51.1	10	0	0	3	100	100		100	36	27-APR
ERNIE	38	73	43	51	52.8	55.9	56.6	55.1	59	0	0	20	100	100	15	72	34	30-APR
EXSEGEN ESTHER	38			38	49.9			49.9	33	0	0	11	100			100	35	28-APR
FFR-exp 1606	37			37	50.8			50.8	59	0	0	20	100			100	31	4-MAY
CLARK	36	65	57	52	46.4	56.7	56.3	53.1	31	0	0	10	100	100	53	84	36	26-APR
FFR 522 W	36			36	51.6			51.6	10	0	0	3	100			100	34	30-APR
26R46	36			36	45.6			45.6	3	0	0	1	100			100	37	1-MAY
TERRA SR 204	35	71		53	51.4	58.2		54.8	20	0	0	7	100	100		100	36	28-APR
COKER 9543	35	66	42	48	48.8	53.8	59.6	54.1	15	0	0	5	100	100	25	75	32	2-MAY
MADISON	34	79	54	55	48.2	55.6	58.1	54.0	46	0	0	15	100	100	35	78	36	1-MAY
JACKSON	34	80	37	50	48.8	56.9	56.3	54.0	21	0	0	7	100	100	10	70	35	2-MAY
KY86C-61-8	33	75	51	53	52.1	57.9	56.0	55.3	14	0	0	5	100	100	24	75	35	2-MAY
POCAHONTAS	33	68	44	48	43.7	56.3	54.6	51.5	31	0	0	10	100	100	11	70	34	28-APR
BECKER	31	75	57	54	48.7	51.8	56.9	52.5	10	0	0	3	100	100	50	83	35	28-APR
COKER 9803	30	71	30	44	49.0	58.2	56.0	54.4	21	0	0	7	100	100	10	70	32	5-MAY
COKER 9704	30	67		49	49.0	57.5		53.3	60	0	0	20	100	100		100	33	3-MAY
FFR 555 W	27	72	44	47	46.6	55.2	49.6	50.5	0	0	0	0	100	100	18	73	35	1-MAY
FFR 523 W	24	64	50	46	43.3	52.6	55.1	50.3	34	0	0	11	100	100	26	75	30	30-APR
MEAN	41	76	50	55	50.4	56.7	56.3	54.4	18	0	0	6	100	100	32	77	36	

CV = 16.6
LSD(0.05) = 8.0
* LOCATION: Logan County
The 1998 and 1997 tests at this location were treated with fungicide at the Feekes growth stage 8.

TABLE 7b WHEAT PERFORMANCE TRIALS FOR SOUTHERN TIER REGION*, 1997.

VARIETY	YIELD (BU/AC)	TEST WT (LB/BU)	PCT LODGED	PCT SURVIVAL	PLANT HEIGHT (IN)	HEADING DATE
25R57	80	55.3	0	100	41	02-May
COKER 9663	75	57.7	3	100	41	01-May
2552	74	59.4	0	100	40	03-May
2540	74	54.1	0	100	42	06-May
AGRIPRO ELKHART	72	58.4	0	100	42	01-May
PATTERSON	69	57.0	0	100	42	02-May
25R26	68	54.3	0	100	37	04-May
GLORY	67	53.2	0	100	39	03-May
AGRIPRO FOSTER	67	56.5	0	100	40	04-May
KAS PATRIOT	66	52.8	0	100	39	02-May
WAKEFIELD	65	52.3	5	100	41	03-May
TERRA SR 204	65	59.1	0	100	41	02-May
2684	64	55.9	0	100	36	27-Apr
TERRA SR 205	64	54.7	0	100	40	02-May
2568	64	52.9	0	100	38	01-May
VERNE	63	55.3	0	100	43	04-May
FFR 558W	63	56.1	0	100	42	04-May
BECK 103	63	52.8	0	100	39	03-May
POCAHONTAS	62	55.1	0	100	35	30-Apr
AGRIPRO CLEMENS	62	54.2	3	100	42	06-May
EK 309	62	54.5	0	100	40	04-May
HOPEWELL	61	51.8	0	100	43	10-May
KAS JUSTICE	60	53.0	0	100	41	04-May
CALDWELL	60	52.1	0	100	42	05-May
EK 102	60	54.8	0	100	37	04-May
MADISON	60	52.5	4	100	38	30-Apr
BECKER	59	51.6	0	100	38	04-May
CARDINAL	58	54.3	0	100	44	08-May
EK 114	58	54.5	0	100	39	04-May
CLARK	58	52.5	0	100	39	28-Apr
ERNIE	57	52.7	0	100	33	30-Apr
COKER 9704	57	57.1	0	100	34	01-May
VORIS 6044	56	51.2	0	100	40	30-Apr
TERRA SR 211	55	53.6	0	100	38	03-May
2510	54	53.4	0	100	41	08-May
2737	54	51.6	0	100	40	04-May
JACKSON	53	53.0	3	100	38	03-May
COKER 9803	49	56.2	0	100	35	01-May
FFR 525W	49	53.6	3	100	38	03-May
FFR 555W	47	48.5	0	100	38	05-May
COKER 9543	45	50.6	3	100	33	02-May
FFR 523W	40	46.9	0	100	32	30-Apr
FEATHERSTONE 520	40	48.5	4	100	36	04-May
MEAN	60	53.9	1	100	39	

CV = 10.9%
LSD(0.05) = 7.6 BU/A
* LOCATION: Warren County
The 1998 test at this location was destroyed by hail.

TABLE 8 WHEAT PERFORMANCE TRIALS FOR NORTH CENTRAL REGION*, 1996-1998.

	—YIELD (BU/AC)—				—TEST WT (LB/BU)—				——PCT LODGED——				--PCT SURVIVAL--				PLANT HEIGHT (IN)
VARIETY	1998	1997	1996	MEAN	1998	1997	1996	MEAN	1998	1997	1996	MEAN	1998	1997	1996	MEAN	1998
2552	65	74	56	65	57.5	57.4	57.0	57.3	15	0	0	5	100	95	81	92	37
AGRIPRO PATTON	62			62	54.0			54.0	10	0	0	3	100			100	37
25W33	62			62	50.9			50.9	11	0	0	4	100			100	36
2540	62	61	61	61	52.6	54.4	57.0	54.7	61	0	0	20	100	96	69	88	35
GLORY	57	53	45	52	53.3	50.6	57.0	53.6	26	25	0	17	100	100	69	90	36
25R26	57	48		53	49.9	51.2		50.6	13	3	0	5	100	100		100	37
VERNE	54	51	47	51	53.1	51.5	55.0	53.2	35	19	0	18	100	100	69	90	40
HYTEST W9850	54			54	52.6			52.6	49	0	0	16	100			100	40
AGRIPRO MASON	53		47	33	54.3		57.0	37.1	35	0	0	12	100		73	58	36
COKER 9663	52	54	51	52	55.1	53.5	55.0	54.5	80	15	0	32	100	91	63	85	38
2568	52	52	58	54	43.6	52.2	57.0	50.9	29	0	0	10	100	100	71	90	34
FFR-exp 332	52			52	56.2			56.2	26	0	0	9	100			100	38
KY86C-61-8	49	49	60	53	50.7	53.2	56.0	53.3	63	5	0	23	100	95	76	90	39
DB 494W	49			49	49.1			49.1	90	0	0	30	100			100	37
CLARK	49	70	53	57	50.1	55.0	55.0	53.4	21	0	0	7	100	100	75	92	38
PATTERSON	49	55	53	52	49.7	53.2	55.0	52.6	33	0	0	11	100	80	70	83	37
ROANE	49			49	55.4			55.4	71	0	0	24	100			100	34
TERRA SR 204	48	43		45	53.8	50.6		52.2	43	18	0	20	100	100		100	38
MADISON	48	52	54	51	47.2	49.0	55.0	50.4	36	28	0	21	100	100	75	92	38
BECK 103	47	40		43	53.7	48.1		50.9	70	8	0	26	100	95		98	37
COKER 9474	46			46	55.0			55.0	65	0	0	22	100			100	34
TERRA Exp 215	46			46	53.8			53.8	53	0	0	18	100			100	39
KAS PATRIOT	46	41	43	43	49.0	51.1	57.0	52.4	50	13	0	21	100	84	60	81	37
25R57	46	49		47	49.9	51.9		50.9	81	0	0	27	100	99		99	36
TERRA SR 211	46	40		43	49.1	47.0		48.1	73	0	0	24	100	66		83	36
AGRIPRO ELKHART	46	41	51	46	54.7	52.6	57.0	54.8	18	3	0	7	100	96	68	88	37
FFR 522 W	46			46	52.0			52.0	84	0	0	28	100			100	32
KAS JUSTICE	45	55	44	48	49.2	50.9	57.0	52.4	41	0	0	14	100	98	73	90	35
FFR 558W	45	37		41	51.0	52.3		51.7	18	0	0	6	100	100		100	38
FFR-exp 1606	44			44	49.5			49.5	93	0	0	31	100			100	32
26R46	44			44	48.4			48.4	19	0	0	6	100			100	34
EXSEGEN ESTHER	44			44	49.2			49.2	73	0	0	24	100			100	36
AGRIPRO FOSTER + GAUCHO	44			44	51.6			51.6	21	0	0	7	100			100	36
EXSEGEN RUTH	44			44	50.0			50.0	51	0	0	17	100			100	35
AGRIPRO FOSTER	43	43	40	42	52.1	51.4	56.0	53.2	6	0	0	2	100	98	58	85	35
COKER 9803	43	47	39	43	53.0	58.0	55.0	55.3	94	3	0	32	100	95	45	80	34
BECKER	42	39	44	42	50.2	49.5	55.0	51.6	68	0	0	23	100	100	60	87	35
FFR 555 W	42	37	45	42	42.5	44.2	56.0	47.6	23	0	0	8	100	88	50	79	35
COKER 9543	41	30	43	38	47.3	52.3	55.0	51.5	63	30	0	31	100	100	64	88	34
DB 555W	41			41	45.7			45.7	85	0	0	28	100			100	36
JACKSON	41	51	30	41	50.9	50.2	57.0	52.7	98	5	0	34	100	69	28	65	35
COKER 9704	41	48		44	52.3	54.3		53.3	93	0	0	31	100	91		96	33
TERRA Exp 216	40			40	45.9			45.9	91	0	0	30	100			100	36
FFR 523 W	39	38	44	40	43.7	45.0	55.0	47.9	49	0	0	16	100	75	54	76	32
POCAHONTAS	38	49	33	40	47.1	50.1	56.0	51.1	**	19	0	40	100	90	36	75	33
WAKEFIELD	37	46	45	43	48.4	51.6	55.0	51.7	41	0	0	14	100	98	60	86	37
CALDWELL	34	37	31	34	47.6	48.3	55.0	50.3	95	0	0	32	100	88	30	73	36
ERNIE	32	41	36	36	50.7	50.3	57.0	52.7	98	33	0	43	100	93	34	75	32
MEAN	47	47	46	47	50.7	51.3	56.0	52.7	53	5	0	19	100	93	60	84	36

CV = 8.9
LSD(0.05) = 4.9
* LOCATION: Shelby County

TABLE 9 NO-TILL WHEAT PERFORMANCE TRIAL FOR SOUTHERN TIER REGION,* 1998.

VARIETY	YIELD (BU/AC)	TEST WT (LBS/BU)	PCT LODGED	PCT SURVIVAL	PLANT HEIGHT (IN)	HEADING DATE 1998
COKER 9663	46.5	56.0	22	100	40	5-MAY
2540	46.5	52.4	0	100	36	29-APR
2552	41.8	55.5	0	100	34	4-MAY
Hytest W9850	41.0	53.2	0	100	39	2-MAY
AGRIPRO MASON	40.0	52.0	0	100	34	30-APR
COKER 9474	39.4	56.0	0	100	35	27-APR
KAS JUSTICE	38.3	52.9	0	100	36	29-APR
FFR-exp 332	37.3	52.2	0	100	39	4-MAY
25R57	37.3	49.8	3	100	37	29-APR
COKER 9803	36.6	56.1	17	100	33	5-MAY
Beck 103	36.3	49.1	37	100	33	28-APR
AGRIPRO PATTON	35.8	51.3	0	100	36	1-MAY
Exsegen Ruth	34.9	51.2	0	100	36	30-APR
2568	34.5	51.0	0	100	35	5-MAY
AGRIPRO ELKHART	34.5	53.0	0	100	36	3-MAY
TERRA Exp 215	33.8	54.4	7	100	38	29-APR
FFR-exp 1606	33.1	52.6	2	100	33	5-MAY
TERRA SR 211	32.8	48.5	28	100	35	29-APR
FFR 522W	32.6	52.7	12	100	34	1-MAY
ERNIE	32.3	52.4	23	100	34	1-MAY
25W33	32.3	46.9	5	100	34	30-APR
DB 555W	32.1	51.0	0	100	36	29-APR
COKER 9704	32.0	55.8	37	100	34	6-MAY
VERNE	31.9	53.2	8	100	39	3-MAY
DB 494W	31.8	50.3	40	100	35	27-APR
MADISON	31.2	49.4	45	100	36	4-MAY
JACKSON	30.7	51.8	8	100	35	5-MAY
KAS PATRIOT	30.3	52.8	10	100	35	29-APR
Exsegen Esther	29.8	51.0	5	100	33	30-APR
AGRIPRO FOSTER + GAUCHO	29.7	50.7	0	100	36	6-MAY
GLORY	29.4	47.9	0	100	35	29-APR
25R26	29.3	48.7	27	100	33	3-MAY
PATTERSON	29.1	50.7	2	100	36	28-APR
TERRA SR 204	28.7	54.1	7	100	36	2-MAY
FFR 558W	28.3	51.2	3	100	36	4-MAY
TERRA Exp 216	28.2	47.9	10	100	37	1-MAY
WAKEFIELD	26.4	48.8	7	100	39	6-MAY
AGRIPRO FOSTER	26.2	48.1	3	100	36	6-MAY
COKER 9543	26.2	48.6	12	100	34	6-MAY
CLARK	25.4	48.6	13	100	36	28-APR
KY86C-61-8	25.3	49.6	5	100	36	3-MAY
CALDWELL	25.1	45.8	0	100	35	29-APR
POCAHONTAS	23.2	47.0	13	100	33	3-MAY
FFR 523W	21.7	44.5	8	100	31	3-MAY
FFR 555W	21.6	43.3	0	100	34	4-MAY
BECKER	15.6	45.5	7	100	34	1-MAY
MEAN	31.9	50.8	9	100	35	

CV = 13.5
LSD (.05) = 5.8
*Location: Logan County

TABLE 10 NO-TILL WHEAT PERFORMANCE TRIAL FOR NORTH CENTRAL REGION,* 1998.

VARIETY	YIELD (BU/AC)	TEST WT (LBS/BU)	PCT LODGED	PCT SURVIVAL	PLANT HEIGHT (IN)
2552	64.2	56.2	0	100	37
2540	63.5	54.8	0	100	36
GLORY	60.5	54.8	0	100	37
AGRIPRO PATTON	59.0	55.4	0	100	39
VERNE	57.9	54.7	0	100	38
Hytest W9850	57.9	55.2	0	100	42
FFR-exp 332	57.5	55.8	0	100	39
COKER 9663	57.4	56.4	0	100	39
25W33	56.2	50.3	0	100	34
25R26	55.9	52.1	0	100	38
2568	55.7	50.1	0	100	36
MADISON	54.3	51.7	0	100	39
COKER 9803	51.5	56.2	0	100	34
COKER 9704	51.2	55.6	0	100	30
AGRIPRO FOSTER+GAUCHO	50.7	55.1	0	100	36
KY86C-61-8	50.6	54.2	0	100	39
FFR 558W	50.0	56.6	0	100	38
AGRIPRO MASON	49.6	55.2	0	100	37
KAS JUSTICE	49.4	55.0	0	100	37
FFR 555W	47.9	53.0	0	100	33
BECKER	47.1	53.0	0	100	35
AGRIPRO FOSTER	46.6	52.2	0	100	35
DB 555W	46.4	53.7	0	100	34
TERRA SR 204	46.1	53.4	0	100	39
PATTERSON	45.7	52.9	0	100	35
Beck 103	45.7	53.4	0	100	38
ERNIE	45.3	53.3	0	100	30
DB 494W	44.6	55.0	0	100	37
COKER 9543	44.6	50.7	0	100	33
AGRIPRO ELKHART	44.5	55.4	0	100	38
Exsegen Ruth	43.2	54.1	0	100	33
JACKSON	42.6	53.3	0	100	33
WAKEFIELD	42.5	53.5	0	100	38
FFR-exp 1606	42.2	52.6	0	100	32
FFR 522W	42.1	56.9	0	100	31
TERRA SR 211	41.9	57.6	0	100	35
TERRA Exp 215	41.8	57.6	0	100	38
KAS PATRIOT	41.7	53.6	0	100	35
TERRA Exp 216	41.4	52.7	0	100	33
COKER 9474	41.1	57.7	0	100	35
FFR 523W	40.7	50.7	0	100	32
CLARK	40.6	52.1	0	100	38
25R57	38.6	52.3	0	100	36
Exsegen Esther	35.8	50.4	0	100	37
POCAHONTAS	35.1	49.2	0	100	33
CALDWELL	29.7	52.2	0	100	32
MEAN	47.8	53.9	0	100	36

CV = 12.0
LSD (.05) = 6.7
*Location: Shelby County
The 1998 test at this location was treated with fungicide at the Feekes stage 8.

TABLE 11 — DISEASE RATINGS OF WHEAT VARIETIES IN 1998.*

VARIETY	LEAF RUST	LEAF BLOTCH	GLUME BLOTCH	POWDERY MILDEW	WSSMV
Agripro Elkhart	MS	VS	S	MR	S
Agripro Foster	S	S	MR	MR	R
Agripro Mason	—	S	S	R	R
Agripro Patton	S	S	S	R	R
Beck 105	—	S	S	R	R
Becker	S	S	MS	VS	R
Caldwell	S	VS	VS	S	S
Clark	S	VS	VS	MS	R
DB 494 W	MR	MS	VS	MR	S
DB 555 W	—	S	S	R	VS
Ernie	VS	VS	MS	MR	MS
Exsegen Esther	—	VS	VS	—	R
Exsegen Ruth	S	VS	VS	S	VS
FFR Exp 332	MR	VS	MR	R	S
FFR 522 W	R	S	S	MR	S
FFR 523 W	MS	VS	S	R	VS
FFR 555 W	S	VS	MS	S	R
FFR 558 W	S	S	MR	S	S
FFR Exp 1606	R	S	S	R	S
Glory	S	S	MR	MS	R
Hytest W9850	MS	MS	R	MR	R
Jackson	S	S	S	R	S
KAS Justice	S	S	MR	MR	MS
KAS Patriot	S	S	S	MR	S
KY 86C-61-8	—	VS	S	S	R
Madison	S	S	S	R	R
Coker 9474	R	S	S	R	MS
Coker 9543	MS	S	S	MS	R
Coker 9663	MS	MS	R	R	MS
Coker 9704	—	S	R	MR	MS
Coker 9803	S	S	MR	R	S
Patterson	MS	VS	VS	MS	R
2540	MS	S	MR	R	R
2552	S	MS	R	R	R
2568	MS	VS	MR	R	R
25R26	VS	VS	MS	R	R
25R57	MS	S	MS	R	VS
25W33	S	VS	R	R	R
26R46	MS	MS	MR	R	S
Pocahontas	—	VS	VS	R	S
Roane	MS	VS	S	R	S
Terra SR 204	S	S	MR	MS	S
Terra SR 211	S	VS	S	MR	S
Verne	S	VS	VS	MR	R
Wakefield	S	MS	MR	MS	MS

*VS= VERY SUSCEPTIBLE; R= RESISTANT; MR= MODERATELY RESISTANT;
S=SUSCEPTIBLE; MS=MODERATELY SUSCEPTIBLE; (—)-INSUFFICIENT OPPORTUNITY
TO RATE IN PRESENCE OF DISEASE.
In general, varieties with a VS or S reaction to a given disease will not perform well if that disease becomes severe, while varieties rated R or MR will perform well in those situations. Varieties with an MS reaction will have an intermediate response.

TABLE 12 CHARACTERISTICS OF BARLEY VARIETIES TESTED IN 1998.

VARIETY	PROTECTED	SOURCE	RELEASE DATE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	LODGING (%)	PLANT HEIGHT (IN.)	SURVIVAL (%)	HEADING DATE
STARLING	YES	VIRGINIA	1993	63.8	41.0	51.3	37.9	100.0	26-APR
PAMUNKEY	YES	VIRGINIA	1993	57.8	46.0	41.3	36.2	100.0	23-MAY
WYSOR	YES	VIRGINIA	1985	56.3	44.7	36.3	38.1	100.0	26-APR
CALLAO	YES	VIRGINIA	1994	45.1	44.8	82.1	33.0	100.0	22-MAY

MEAN = 55.7 BU/A
CV = 30.6
LSD(0.05) = 11.7

TABLE 13 BARLEY PERFORMANCE TRIALS FOR BLUEGRASS REGION*, 1995, 1997, 1998.

VARIETY	YIELD (BU/AC) 1998	1997	1995	MEAN	TEST WT (LB/BU) 1998	1997	1995	MEAN	PCT LODGED 1998	1997	1995	MEAN	PCT SURVIVAL 1998	1997	1995	MEAN	PLANT HEIGHT (IN) 1998	HEADING DATE 1998
STARLING	80	21	69	56	36.2	42.8	38.8	39.3	88	0	3	30	100	100	100	100	42	2-MAY
WYSOR	66	38	65	56	44.1	40.6	41.2	42.0	90	0	14	35	100	100	100	100	42	2-MAY
PAMUNKEY	47	37	61	48	42.2	45.7	44.8	44.2	83	0	4	29	100	100	100	100	40	29-APR
CALLAO	37	46	58	47	41.4	47.5	45.4	44.8	84	0	23	35	100	100	100	100	35	30-APR
MEAN	57	35	62	51	41.0	44.2	41.7	42.3	49	0	27	25	100	100	100	100	39	

CV = 38.3
LSD(0.05) = 28.5
* LOCATION: Lexington, Spindletop Farm
The 1996 test was not harvested due to winterkill.

TABLE 14 BARLEY PERFORMANCE TRIALS FOR WESTERN COAL FIELD REGION*, 1996-1998.

VARIETY	YIELD (BU/AC) 1998	1997	1996	MEAN	TEST WT (LB/BU) 1998	1997	1996	MEAN	PCT LODGED 1998	1997	1996	MEAN	PCT SURVIVAL 1998	1997	1996	MEAN	PLANT HEIGHT (IN) 1998	HEADING DATE 1998
PAMUNKEY	59	86	31	58	49.1	46.5	38.1	44.6	28	0	0	9	100	100	2	67	36	23-APR
WYSOR	52	90	68	70	44.5	46.8	42.4	44.6	15	0	0	5	100	100	21	74	38	27-APR
STARLING	50	88	62	66	43.7	44.4	43.0	43.7	45	0	0	15	100	100	14	71	38	27-APR
CALLAO	40	98	53	63	50.8	48.2	46.4	48.5	83	0	0	28	100	100	8	69	33	21-APR
MEAN	50	90	46	62	47.0	46.5	43.4	45.6	24	0	0	8	100	100	9	70	36	

CV = 14.2
LSD(0.05) = 9.1
* LOCATION: Princeton, Limestone soil

TABLE 14a BARLEY PERFORMANCE TRIALS FOR SOUTHERN TIER REGION*, 1996-1998.

VARIETY	YIELD (BU/AC) 1998	1997	1996	MEAN	TEST WT (LB/BU) 1998	1997	1996	MEAN	PCT LODGED 1998	1997	1996	MEAN	PCT SURVIVAL 1998	1997	1996	MEAN	PLANT HEIGHT (IN) 1998	HEADING DATE 1998
PAMUNKEY	67	97	50	71	46.8	44.3	48.9	46.7	14	3	0	5	100	100	6	69	33	17-APR
STARLING	62	109	71	81	43.1	41.5	45.3	43.3	21	25	0	15	100	100	20	73	34	18-APR
CALLAO	59	103	70	77	42.2	46.3	48.0	45.5	80	18	0	33	100	100	18	73	32	15-APR
WYSOR	52	101	74	75	45.4	44.6	46.4	45.5	4	0	0	1	100	100	31	77	34	18-APR
MEAN	60	102	63	75	44.4	44.2	46.3	45.0	17	6	0	8	100	100	20	73	33	

CV = 13.2
LSD(0.05) = 10.2
* LOCATION: Logan County

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