Table 16.—Characteristics of Recommended and Certified Small Grain Varieties.

WHEAT

Variety	U.S.[1] Protected Variety	Origin	Date of Release	Straw Strength	Relative Height	Maturity	Winter Hardiness	Hessian Fly	Powdery Mildew	Leaf Rust	Septoria Leaf Blotch
Abe*	Yes	Indiana	1972	Excellent	Short	Early	Excellent	Excellent	Excellent	Excellent	Poor
Arthur*	No	Indiana	1968	Good	Short	Early	Excellent	Fair	Excellent	Good	Poor
Arthur 71*	Yes	Indiana	1971	Good	Short	Early	Excellent	Excellent	Excellent	Excellent	Poor
McNair 4823*	Yes	McNair Seed	1972	Excellent	Short	Late	Very Good	Poor	Poor	Poor	Poor
Oasis*	Yes	Indiana	1973	Good	Short	Early	Excellent	Excellent	Excellent	Excellent	Good

WINTER OATS

Variety	U.S.[1] Protected Variety	Origin	Date of Release	Straw Strength	Relative Height	Maturity	Winter Hardiness
Coker 66-22*	No	Coker's Pedigree Seed Co.	1969	Excellent	Medium	Early	Good
Compact*	No	Kentucky	1968	Excellent	Very short	Med. to Late	Very Good
Dubois*	Nd	Indiana	1952	Good	Medium	Medium	Good
Norline*	No	Indiana	1960	Good	Med. to Tall	Med. to Late	Very Good
Walken*	No	Kentucky	1970	Excellent	Short	Late	Very Good

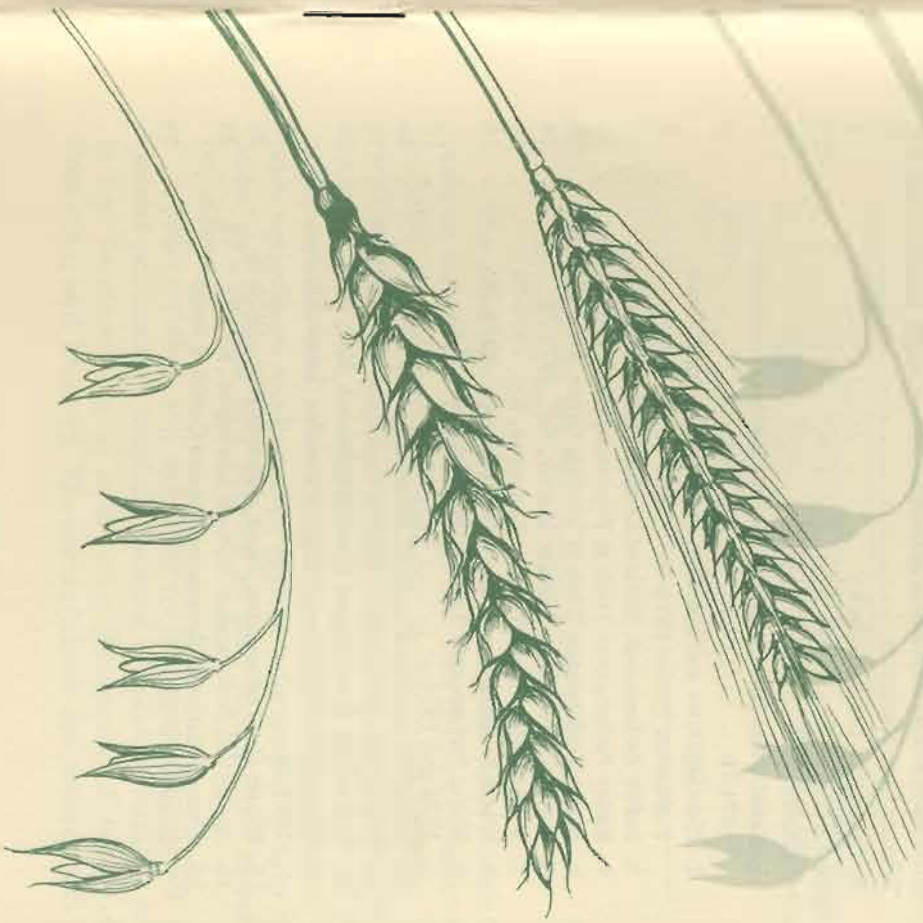
Barley

Variety	U.S. Protected Variety	Origin	Date of Release	Straw Strength	Relative Height	Relative Maturity	Winter Hardiness	Loose Smut
Barsoy*	No	Kentucky	1966	Excellent	Short	Very early	Good	Susceptible
Harrison	No	Indiana	1963	Excellent	Short	Late	Excellent	Susceptible
Knob*	No	Kentucky	1969	Good	Short	Early	Good	Susceptible
Monroe*	No	Virginia	1976	Good	Short	Late	Good	Susceptible
Volbar*	No	Tennessee	1974	Good	Medium	Medium	Good	Susceptible

[1] "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.

* Recommended varieties for Kentucky.

12M—9-76



Kentucky Small Grain Variety Trials—1976

By W. E. Vian, V. C. Finkner and C. R. Tutt

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In 1976, Kentucky farmers harvested fewer acres of small grains, continuing the decline from the 1974 high of 478,000 acres harvested. The unusual growing season of 1975-76 with its warm February, cool March, freezing temperatures of April and May, and the drought conditions, were probably the biggest factor in the reduced small grain acres harvested (Table 1).

Table 1.—Small Grain Harvested Acreage and Yields in Kentucky—1974-76.

	1976[1]		1975[2]		1974[2]	
	1,000 A Harvest	Yield Bu/A	1,000 A Harvest	Yield Bu/A	1,000 A Harvest	Yield Bu/A
Wheat	340	29	352	34	390	32
Oats	10	37	10	41	10	37
Barley	32	37	34	37	48	38
Rye	3	24	4	25	3	21
	385		400		478	

[1] Indicated July 12, 1976. From Crop Production, USDA, Washington, D.C.

[2] From Kentucky Crop and Livestock Reporting Service, Louisville, Ky.

The objective of the Kentucky small grain variety trials is to evaluate varieties of barley, wheat and oats 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 four locations (Fig. 1) in the state (Lexington, Bowling Green, Princeton, and Murray). Recommendations are revised each year

Fig. 1.—Testing locations of Kentucky small grain variety trials.

Location	*Cooperator*
1. Murray—	Murray State University Agriculture Department
2. Princeton—	West Kentucky Substation
3. Bowling Green—	Western Kentucky University Agriculture Department
4. Lexington—	Kentucky Agricultural Experiment Station

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 four-row seeder. Each plot consisted of four rows spaced one foot apart and trimmed to 10 feet in length. Each variety was grown in four replications, and the data presented are the average response from the two harvested center rows of the four plots. Planting dates of all trials for the past 3 years are listed in Table 2.

In some instances, uncontrollable factors such as excessive rainfall, high winds, hail, 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.

Table 2.—Planting Dates and Location of Kentucky Small Grain Evaluation Trials—1974-76.

	Location and Harvest Year											
	Lexington			Princeton			Murray			Bowling Green		
Crop	1976	1975	1974	1976	1975	1974	1976	1975	1974	1976	1975	1974
Wheat	10-22	10-10	10-12	10-24	10-23	10-24	10-15	10-15	10-23	10-28	10-28	10-22
Barley	10-15	10-10	10-12	10-24	10-23	10-24	10-15	10-15	10-23	10-28	10-28	10-22
Winter Oats	10-7	10-10	10-12	10-24	10-23	10-24	10-15	10-15	10-23	10-28	10-28	10-22
Spring Oats	3-26	4-8	-	-	-	-	-	-	-	-	-	-

DATA COLLECTED

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

Grain yield was taken by cutting the two center rows of each plot and threshing the grain with a stationary plot thresher. 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 grain. The higher the test weight, the higher the quality and market value, unless the grain has been downgraded because of another quality factor.

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 is reported 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 a measure of maturity and is important when selecting a variety for use in a double-cropping system.

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 report that a variety was 50% lodged does not imply that only 50% of the grain could be harvested. With good equipment, it may be expected that almost all of the grain could 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.

1976 TEST CONDITIONS

The fall weather conditions were near ideal for planting small grain. The temperature was cool, but periods of dry weather allowed the small grain to be planted. Precipitation for the winter months totaled near normal with less than the usual amount of snow cover. Temperatures averaged above normal for every month except January. February was the warmest February in the last 75 years, averaging 7-9° above normal. March had cold temperatures in the latter half of the month. Freezes occurred the last of April and the first part of May. The yields of some varieties were reduced as much as 50% at Lexington and Princeton and a lesser amount at Murray and Bowling Green. Farmer fields varied in the amount of damage depending on the developmental stage of the plants and the temperature in local areas. The damage ranged from 0% to 100%, with 18% statewide average yield reduction (Kentucky Crop and Livestock Reporting Service, Louisville, Ky.). An unusually dry May resulted in reduced plant heights in many parts of the state.

1975 TEST CONDITIONS

Weather conditions in 1974 were good for fall seeding of the small grain crop. Winter temperatures were mild with above-average temperatures, which resulted in very little winter killing of small grain. The crop made slow growth in the spring owing to a prolonged period of cool wet weather which extended through April. Some loss from flooding occurred in the spring because of heavy rainfall. Hard winds and heavy rains about June 15 resulted in severe lodging in several areas. Hail occurred at Bowling Green which destroyed the wheat and barley variety trials.

Small grain yields were better at all test locations, equalling and usually exceeding the 1973 and 1974 averages. A heavy weed infestation occurred at Lexington, reducing the yields. Winter killing was not observed at any location. The variety trials were not infested so heavily with Barley Yellow Dwarf Virus or Wheat Spindle Streak Mosaic Virus as in the previous two years. The susceptible wheat varieties indicated severe infestation of Septoria Glume Blotch. The resistance (low grade) of Abe, Arthur, Arthur 71 and Oasis was apparent. Scald was observed on some barley varieties.

1974 TEST CONDITIONS

Fall weather conditions in 1973 were nearly ideal for seeding the 1974 small grain crop. The winter season was relatively mild, resulting in very little winter-killing. The mild fall and winter were very favorable for the spread of several small grain diseases. The severity of these diseases resulted in a slight yield loss in some areas and almost complete crop failure in other areas.

Small grain variety trial yields in 1974 were very low at the Princeton, Murray, and Bowling Green test locations. The variety trials at Princeton and Murray were badly infested with Barley Yellow Dwarf Virus, and the test at Bowling Green was also infested to a lesser extent. This disease infected all three crops: wheat, oats, and barley. Another disease, Scald, was very severe on barley at Princeton and Murray. The wheat varieties at Princeton and Murray were infected with Septoria Leaf Blotch, Septoria Glume Blotch, and a new disease in Kentucky identified as Wheat Spindle Streak Mosaic Virus. Good yields were obtained at the Lexington location where little disease damage was noted.

RECOMMENDATIONS FOR 1977

Recommended varieties are those which are superior in one or more characteristics important for the crop and have been tested by the Kentucky Agricultural Experiment Station for 2 or more years. Varieties eligible for certification include, in addition to the recommended varieties, (1) varieties that may have potential for Kentucky and (2) older varieties that are still

acceptable for production in Kentucky but are not as good as the recommended varieties. A summary of the characteristics of the recommended and certified small grain varieties is presented in Table 18. All varieties listed are eligible for certification in Kentucky, and those varieties designated by an asterisk (*) are recommended by the Kentucky Agricultural Experiment Station.

WINTER BARLEY VARIETIES

Recommended winter barleys are less winter-hardy than winter wheat but more hardy than winter oats. The degree of winterhardiness, straw strength, and maturity are important characteristics when choosing a variety. Barley performs poorly on soils not well-drained. It is an excellent feed grain for livestock. Varietal performance data are presented in Tables 3-6. Recommended varieties are Barsoy, Knob, and Volbar.

SOFT RED WINTER WHEAT VARIETIES

Kentucky's climate and soils are well suited for the production of high quality soft red winter wheat. No one variety has all the desirable characteristics; each has certain advantages. Yielding ability, straw strength, height, earliness, grain quality and disease resistance are important in choosing a variety. Wheat is an excellent feed grain for livestock. Varietal performance is presented in Tables 7-10. Recommended varieties are Arthur, Arthur 71, Abe, Oasis and McNair 4823.

WINTER OAT VARIETIES

Winter oats are the least winterhardy of the winter grains. Early seeding, good fertilization practices, and planting on well-drained soils are recommended to minimize winter killing. Most winter oats are susceptible to the crown rusts so the variety must be selected in respect to maturity, lodging resistance, and yielding ability. Winter oats are excellent also for fall grazing and silage. Performance of the winter oat varieties is presented in Tables 11-14. Recommended varieties are Coker 66-22, Compact, Dubois, Norline, and Walken.

The only small grain suitable for spring seeding by farmers in Kentucky is spring oats. Spring oats are used mainly for hay or silage and as a companion crop for grasses and legumes. Grain and forage yields of spring oats are lower than those of the recommended winter oats varieties when yields of winter oats are not severely reduced from winterkilling or disease. Two spring oat varieties (Otee and Jaycee) are recommended because of their higher level of resistance to Barley Yellow Dwarf Virus (oat red leaf).

CERTIFIED SEED

Planting certified seed is one of the first steps in insuring 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 insure 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.

Acknowledgment is made to John Byars, of the Department of Agronomy, and to the University of Kentucky Computing Center, for assistance in summarizing the results reported in this progress report and to Harold Vaught, Extension Area Agronomy Specialist, for his assistance in collecting field data at Bowling Green.

Table 3.—Barley Performance Trials at Lexington, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results			
Barsoy	64	51.0	0	32	100	4-17
Dayton	74	46.6	0	37	100	4-23
Harrison	65	48.6	0	34	100	5-2
Henry	81	48.9	0	34	100	4-24
Kanby	76	49.8	0	34	100	5-3
Ky. 1	69	50.6	0	43	100	5-5
Keowee	90	51.4	0	39	100	4-26
Knob	68	48.4	0	34	100	4-22
Lakeland	74	49.1	0	34	100	5-1
McNair 3004	83	51.4	0	32	100	4-21
Monroe	77	48.6	0	33	100	5-2
Paoli	83	48.9	0	30	100	4-26
Pike	65	49.9	0	29	100	4-19
Surry	73	47.3	0	35	100	4-22
Volbar	93	49.5	0	38	100	4-28
			Two-year Average 1975-76			
Barsoy	57	47.7	36	34	100	4-22
Dayton	60	43.8	18	38	100	4-28
Harrison	58	47.3	6	37	100	5-4
Henry	73	46.5	34	37	100	4-29
Kanby	62	47.1	48	37	100	5-5
Keowee	76	48.6	42	38	100	4-30
Knob	58	45.5	34	35	100	4-28
Lakeland	64	46.9	36	37	100	5-5
Monroe	70	45.0	30	35	100	5-4
Paoli	66	46.4	38	33	100	4-30
Surry	69	44.9	38	37	100	4-27
Volbar	81	47.6	41	40	100	5-2
			Three-year Average 1974-76			
Barsoy	53	47.2	24	34	100	-
Dayton	54	43.4	12	39	100	-
Harrison	53	47.0	4	37	100	-
Keowee	68	48.2	28	39	100	-
Knob	50	45.2	22	35	100	-
Lakeland	59	46.4	24	36	100	-
Paoli	60	46.1	25	33	100	-

Table 4.—Barley Performance Trials at Princeton, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results			
Barsoy	47	40.4	23	40	100	4-11
Dayton	30	34.9	83	38	100	4-18
Harrison	39	42.6	62	39	100	4-26
Henry	60	43.6	78	36	100	4-21
Kanby	24	40.4	97	36	100	4-27
Ky. 1	27	41.0	100	42	100	4-30
Keowee	42	42.5	77	40	100	4-25
Knob	43	41.5	40	37	100	4-20
Lakeland	52	41.1	62	38	100	4-28
McNair 3004	33	48.3	92	35	100	4-18
Monroe	67	43.0	78	37	100	4-27
Paoli	36	43.8	33	34	100	4-25
Pike	40	37.5	13	34	100	4-15
Surry	50	42.3	98	38	100	4-18
Volbar	52	39.8	73	42	100	4-20
			Two-year Average 1975-76			
Barsoy	49	41.3	67	36	100	4-20
Dayton	38	35.6	89	38	100	4-26
Harrison	43	43.1	81	38	100	5-2
Henry	71	42.7	67	38	100	4-28
Kanby	34	40.0	99	38	100	5-2
Keowee	46	42.4	90	38	100	5-1
Knob	40	39.4	69	34	100	4-27
Lakeland	49	41.4	81	37	100	5-3
Monroe	71	41.0	87	37	100	5-2
Paoli	43	42.2	71	34	100	4-29
Surry	59	41.5	99	39	100	4-25
Volbar	59	41.4	88	42	100	4-28
			Three-year Average 1974-76			
Barsoy	34	41.3	43	31	100	4-20
Dayton	29	34.6	81	34	100	4-25
Harrison	36	42.5	52	35	100	5-2
Keowee	39	41.4	64	35	100	4-30
Knob	29	39.4	44	30	100	4-27
Lakeland	41	39.5	61	35	100	5-3
Paoli	38	41.6	47	32	100	4-28

Table 5.—Barley Performance Trials at Bowling Green, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results			
Barsoy	55	43.6	0	33	100	4-13
Dayton	46	37.4	5	34	100	4-21
Harrison	38	43.4	0	32	95	4-28
Henry	53	41.9	0	32	100	4-24
Kanby	48	42.2	5	36	100	4-30
Ky. 1	34	42.4	85	38	100	5-3
Keowee	42	43.4	0	34	100	4-26
Knob	43	41.9	0	31	100	4-21
Lakeland	40	42.8	0	32	100	4-29
McNair 3004	56	44.0	0	33	100	4-21
Monroe	52	41.1	0	34	100	4-28
Paoli	37	39.9	0	26	100	4-26
Pike	49	41.6	0	27	100	4-17
Surry	58	42.4	0	34	100	4-20
Volbar	73	42.5	0	41	100	4-24
			Two-year Average 1974 and 1976[1/]			
Barsoy	38	42.4	39	32	100	4-13
Dayton	34	36.5	41	34	100	4-21
Harrison	37	42.2	18	34	98	4-29
Keowee	29	42.1	36	34	100	4-28
Knob	36	41.1	3	30	100	4-22
Lakeland	28	40.7	22	33	100	4-30
Paoli	34	39.3	8	29	100	4-24
			Three-year Average 1974-76			
			Data not available.			

[1/] The 1975 trial at Bowling Green was destroyed by hail.

Table 6.—Barley Performance Trials at Murray, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results			
Barsoy	45	45.9	0	30	76	4-9
Dayton	33	43.2	0	30	65	4-18
Harrison	18	44.1	0	27	61	4-25
Henry	48	46.8	0	29	74	4-22
Kanby	34	45.9	0	32	79	4-26
Ky. 1	22	45.2	0	32	55	4-26
Keowee	43	47.0	0	31	79	4-22
Knob	46	46.2	0	26	72	4-19
Lakeland	30	45.6	0	28	80	4-22
McNair 3004	45	47.8	0	28	65	4-17
Monroe	41	45.2	0	28	78	4-27
Paoli	16	43.3	0	34	75	4-25
Pike	36	45.9	0	26	70	4-13
Surry	55	46.0	0	30	81	4-15
Volbar	48	43.6	0	34	78	4-20
			Two-year Average 1975-76			
Barsoy	47	44.3	8	31	88	4-14
Dayton	39	40.3	2	30	82	4-23
Harrison	27	43.7	0	28	81	5-1
Henry	51	43.9	0	30	87	4-27
Kanby	40	44.4	4	32	89	4-29
Keowee	46	45.5	2	31	89	4-27
Knob	44	43.3	0	27	86	4-24
Lakeland	34	44.5	0	29	90	4-30
Monroe	53	42.3	0	29	89	4-30
Paoli	29	42.6	2	32	88	4-27
Surry	57	42.6	0	31	91	4-21
Volbar	64	43.6	0	36	89	4-25
			Three-year Average 1974-76			
Barsoy	38	42.8	5	27	92	4-13
Dayton	33	38.3	2	28	87	4-23
Harrison	23	43.7	0	26	87	5-1
Keowee	35	45.5	1	28	93	4-27
Knob	39	43.3	0	26	89	4-24
Lakeland	32	42.4	0	28	93	4-30
Paoli	25	42.6	2	30	90	4-27

Table 7.—Wheat Performance Trials at Lexington, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results[1/]			
Abe	26	57.4	0	29	83	5-11
Ark. 39-3	26	57.2	0	32	93	5-14
Arthur	28	58.2	0	30	88	5-14
Arthur 71	27	57.6	0	31	93	5-11
Blueboy II	26	53.3	0	32	93	5-17
Coker 68-15	32	60.6	0	31	87	5-18
Coker 74-20	23	57.8	0	37	83	5-13
Coker 74-27	35	60.0	0	28	90	5-14
Coker 74-23	32	59.9	0	27	97	5-15
Doublecrop	21	60.1	0	31	85	5-14
Fredrick	34	57.2	0	40	84	5-18
Funk W-504	26	59.6	0	33	83	5-18
Beau	33	59.8	0	30	74	5-13
Knox 62	26	59.1	0	37	91	5-16
Lewis	30	57.3	0	34	80	5-15
McNair 1813	22	56.9	0	30	76	5-14
McNair 3003	28	57.1	0	30	90	5-16
McNair 3001	32	55.0	0	30	91	5-16
McNair 4823	38	60.8	0	30	93	5-16
McNair 701	26	55.6	0	28	86	5-15
Mo W8656	27	55.4	0	32	84	5-14
Oasis	28	57.3	0	31	94	5-14
Ruler	36	59.6	0	33	94	5-17
131 Fas Gro Triticale	32	46.2	0	55	93	5-16
			Two-year Average 1975-76			
Abe	43	58.7	4	37	94	4-24
Arthur	40	59.7	0	37	94	4-29
Arthur 71	39	57.8	19	38	96	4-28
Blueboy II	33	50.7	0	38	97	5-2
Coker 74-27	40	55.4	24	33	95	4-29
Coker 74-23	38	56.2	0	30	98	4-29
Fredrick	39	55.8	5	44	92	5-5
Funk W-504	30	54.8	11	38	92	4-30
Knox 62	28	54.9	45	43	96	5-1
Lewis	38	57.3	4	41	90	4-30
McNair 3001	34	52.7	0	35	96	5-1
McNair 4823	40	53.6	12	36	97	5-1
McNair 701	26	55.6	0	28	86	5-15
Oasis	37	58.7	7	37	97	5-2
			Three-year Average 1974-76			
Abe	43	58.6	4	37	94	4-24
Arthur	42	59.1	0	37	94	4-29
Arthur 71	39	57.5	15	37	96	4-28
Blueboy II	33	51.4	1	37	97	5-2
Fredrick	42	56.2	4	44	92	5-5
Knox 62	31	55.3	40	43	96	5-1
Lewis	39	57.0	5	41	90	4-30
McNair 4823	38	53.3	11	35	97	5-1
McNair 701	26	55.6	0	28	86	5-15
Oasis	39	58.3	6	37	97	5-2

[1/] Approximately 50% reduction in yield occurred because of freeze damage.

Table 8.—Wheat Performance Trials at Princeton, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results[1]			
Abe	19	53.5	0	39	100	4-22
Ark. 39-3	37	56.9	0	40	100	4-20
Arthur	25	54.7	0	39	100	4-21
Arthur 71	23	54.4	0	41	100	4-22
Blueboy II	32	53.3	0	43	100	4-25
Coker 68-15	30	54.2	0	42	100	4-23
Coker 74-20	20	51.7	0	34	100	4-21
Coker 74-27	28	56.1	0	41	100	4-25
Coker 74-23	23	53.5	0	35	100	4-24
Doublecrop	44	53.6	0	39	100	4-16
Fredrick	37	56.1	0	45	100	4-21
Funk W-504	25	55.0	0	39	100	4-21
Beau	20	55.9	0	39	100	4-23
Knox 62	28	54.6	0	46	100	4-22
Lewis	22	51.6	0	45	100	4-22
McNair 1813	11	—	0	40	100	4-21
McNair 3003	33	52.8	0	39	100	4-21
McNair 3001	30	48.5	0	39	100	4-25
McNair 4823	43	53.7	0	40	100	5-6
McNair 701	28	50.8	0	41	100	4-21
Mo W8656	43	55.6	0	42	100	4-22
Oasis	21	53.3	0	44	100	4-23
Ruler	26	53.9	0	44	100	4-29
131 Fas Gro Triticale	27	42.5	0	39	100	5-9
			Two-year Average 1975-76			
Abe	29	54.9	9	39	100	5-1
Arthur	31	55.1	23	40	100	4-30
Arthur 71	28	55.3	21	40	100	4-30
Blueboy II	35	51.0	2	43	100	5-2
Coker 74-27	30	54.0	44	38	100	5-2
Coker 74-23	30	55.3	31	33	100	4-29
Frederick	35	55.1	0	45	100	5-5
Funk W-504	22	54.2	46	41	100	4-29
Knox 62	26	53.6	41	45	100	5-1
Lewis	26	52.5	43	45	100	4-30
McNair 3001	30	46.9	19	38	100	5-2
McNair 4823	42	47.2	35	39	100	5-7
McNair 701	28	50.8	0	41	100	4-21
Oasis	28	54.9	13	42	100	5-1
			Three-year Average 1974-76[2]			
Abe	28	54.9	6	36	100	4-30
Arthur	27	53.8	15	37	100	4-30
Arthur 71	24	54.6	14	36	100	4-30
Blueboy II	26	51.0	1	39	100	5-4
Frederick	31	53.4	0	43	100	5-8
Knox 62	20	53.6	27	42	100	5-2
Lewis	20	52.5	28	41	100	4-30
McNair 4823	30	47.2	23	36	100	5-4
McNair 701	28	50.8	0	41	100	4-21
Oasis	26	54.4	8	39	100	5-1

[1] Only three reps were harvested and all varieties that headed after 4-16 and before 5-6 were damaged by frost.

[2] Severe disease problems occurred in 1974.

Table 9.—Wheat Performance Trials at Bowling Green, Ky., 1974 and 1976.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results			
Abe	39	55.1	0	35	100	4-25
Ark. 39-3	35	55.2	0	39	100	4-24
Arthur	40	55.4	0	38	100	4-23
Arthur 71	39	54.4	0	37	100	4-25
Blueboy II	30	53.3	0	38	100	4-26
Coker 68-15	33	53.4	0	37	100	4-25
Coker 74-20	46	55.2	0	31	100	4-24
Coker 74-27	33	52.5	0	34	100	4-25
Coker 74-23	42	55.9	0	31	100	4-22
Doublecrop	42	56.3	0	38	100	4-20
Fredrick	37	52.6	0	40	100	4-24
Funk W-504	37	55.9	0	36	100	4-23
Beau	38	55.7	0	36	100	4-25
Knox 62	36	55.3	0	40	100	4-23
Lewis	24	52.2	0	40	100	4-25
McNair 1813	34	54.3	0	36	100	4-23
McNair 3003	39	47.4	0	36	100	4-24
McNair 3001	36	50.7	0	34	100	4-25
McNair 4823	30	54.3	0	35	100	5-6
McNair 701	37	51.7	0	37	100	4-24
Mo W8656	45	53.9	0	40	100	4-23
Oasis	38	56.3	0	36	100	4-25
Ruler	32	55.9	0	40	100	5-5
131 Fas Gro Triticale	27	44.3	0	54	100	5-8
			Two-year Average 1974 and 1976			
Abe	39	54.4	13	35	100	4-27
Arthur	39	55.6	16	37	100	4-26
Arthur 71	36	55.3	21	37	100	4-27
Blueboy II	31	48.9	13	38	100	4-28
Fredrick	33	52.4	3	40	100	5-4
Knox 62	30	55.4	34	40	100	4-27
Lewis	27	52.9	23	40	100	4-28
McNair 4823	28	49.4	49	34	100	4-30
McNair 701	37	51.7	0	37	100	4-24
Oasis	37	56.0	6	35	100	4-27

[1] 1975 test was destroyed by hail

Table 10.—Wheat Performance Trials at Murray, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results[1]			
Abe	52	57.5	0	34	81	4-17
Ark. 39-3	44	56.8	0	39	86	4-18
Arthur	50	57.2	0	36	83	4-17
Arthur 71	46	57.6	0	34	83	4-17
Blueboy II	44	57.0	0	35	84	4-20
Coker 68-15	36	56.8	0	36	85	4-19
Coker 74-20	46	57.3	0	34	70	4-16
Coker 74-27	46	57.2	0	33	86	4-20
Coker 74-23	44	56.1	0	30	81	4-15
Doublecrop	48	56.9	0	36	84	4-13
Fredrick	51	57.4	0	42	90	4-21
Funk W-504	48	58.9	0	36	80	4-17
Beau	37	58.4	0	32	80	4-21
Knox 62	44	58.9	0	40	80	4-20
Lewis	45	56.7	0	38	84	4-19
McNair 1813	40	57.6	0	35	81	4-17
McNair 3003	47	56.8	0	36	86	4-16
McNair 3001	39	53.6	0	35	79	4-19
McNair 4823	31	58.4	0	34	84	4-29
McNair 701	42	55.0	0	36	79	4-17
Mo W8656	48	55.5	0	36	78	4-19
Oasis	45	58.3	0	34	86	4-19
Ruler	29	59.2	0	37	83	4-28
131 Fas Gro Triticale	24	45.8	0	56	86	5-1
			Two-year Average 1975-76			
Abe	48	58.3	0	35	91	4-26
Arthur	46	57.8	0	37	91	4-26
Arthur 71	46	58.2	0	36	91	4-26
Blueboy II	48	56.3	0	38	92	4-29
Coker 74-27	48	57.3	0	33	93	4-27
Coker 74-23	41	57.0	0	29	91	4-24
Fredrick	44	58.2	0	45	95	5-3
Funk W-504	44	57.9	0	38	90	4-26
Knox 62	44	58.9	0	42	90	4-27
Lewis	46	56.9	0	39	92	4-27
McNair 3001	42	53.2	0	35	89	4-28
McNair 4823	37	56.1	0	35	92	5-3
McNair 701	42	55.0	0	36	79	4-17
Oasis	47	58.5	0	36	93	4-27
			Three-year Average 1974-76[2]			
Abe	41	57.9	0	33	94	4-26
Arthur	38	56.7	0	34	94	4-26
Arthur 71	38	57.9	0	33	94	4-26
Blueboy II	37	53.4	0	36	95	4-30
Fredrick	41	57.3	0	44	97	5-5
Knox 62	34	58.9	0	40	93	4-27
Lewis	37	54.5	0	38	95	4-27
McNair 4823	27	56.1	0	32	95	4-29
McNair 701	42	55.0	0	36	79	4-17
Oasis	39	57.3	0	34	95	4-27

[1] Some frost damage occurred.

[2] Severe disease problems occurred in 1974.

Table 11.—Winter Oat Performance Trials at Lexington, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results			
Coker 66-22	83	37.7	0	32	98	5-10
Coker 70-16	84	37.8	0	26	100	5-10
Coker 75-22	98	38.4	0	24	92	5-12
Compact	69	37.5	0	25	98	5-14
Cumberland	75	35.9	0	29	90	5-15
Dubois	61	37.2	0	32	100	5-13
Norline	72	37.2	0	34	100	5-18
Pennlan	82	37.8	0	27	80	5-12
Roanoke	36	34.0	0	38	22	5-17
Walken	67	36.0	0	28	100	5-24
Windsor	85	36.9	0	31	92	5-7
			Two-year Average 1975-76			
Coker 66-22	77	36.5	50	35	99	5-13
Coker 70-16	82	35.9	50	32	100	5-13
Compact	66	35.6	50	28	99	5-19
Dubois	62	36.2	50	35	100	5-18
Norline	66	35.1	50	35	100	5-21
Pennlan	80	36.6	50	33	90	5-14
Walken	68	34.4	50	33	100	5-25
			Three-year Average 1974-76			
Coker 66-22	77	36.7	33	36	99	-
Coker 70-16	89	36.1	33	32	100	-
Compact	66	35.9	33	28	99	-
Dubois	60	36.3	33	36	100	-
Norline	62	35.5	33	36	100	-
Pennlan	87	36.6	33	33	90	-
Walken	70	34.9	33	34	100	-

Table 12.—Winter Oat Performance Trials at Princeton, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results			
Coker 66-22	-	-	-	-	63	5-7
Coker 70-16	-	-	-	-	39	5-8
Coker 75-22	-	-	-	-	40	5-12
Compact	-	-	-	-	85	5-16
Cumberland	-	-	-	-	27	5-12
Dubois	-	-	-	-	80	5-10
Norline	-	-	-	-	77	5-15
Pennlan	-	-	-	-	17	5-8
Roanoke	-	-	-	-	37	5-13
Walken	-	-	-	-	92	5-26
Windsor	-	-	-	-	78	5-7
			Two-year Average 1975-76.[1/]			
Coker 66-22	44	28.0	75	44	84	5-9
Coker 70-16	46	29.6	68	41	74	5-10
Compact	39	28.6	50	36	94	5-19
Dubois	27	29.2	54	38	91	5-15
Norline	25	27.0	66	43	90	5-18
Pennlan	41	30.3	51	41	64	5-10
Walken	27	27.1	54	42	96	5-24
			Three-year Average 1974-76			
Coker 66-22	-	-	-	-	90	5-7
Coker 70-16	-	-	-	-	83	5-8
Compact	-	-	-	-	96	5-18
Dubois	-	-	-	-	94	5-14
Norline	-	-	-	-	94	5-18
Pennlan	-	-	-	-	77	5-9
Walken	-	-	-	-	98	5-22

[1/] The yield, test weight, lodging and plant height data are for the 1974 and 1975 two-year period.

Table 13.—Winter Oat Performance Trials at Bowling Green, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results			
Coker 66-22	50	31.2	0	36	86	5-6
Coker 70-16	44	32.8	0	31	76	5-7
Coker 75-22	69	32.6	0	28	71	5-9
Compact	48	34.4	0	29	88	5-16
Cumberland	50	28.9	0	34	30	5-13
Dubois	33	34.7	0	34	80	5-12
Norline	49	34.2	0	38	80	5-18
Pennlan	48	33.3	0	32	60	5-8
Roanoke	18	29.7	0	38	9	5-12
Walken	66	33.3	0	38	96	5-24
Windsor	47	28.2	0	35	86	5-6
			Two-year Average 1975-76			
Coker 66-22	47	27.1	50	34	93	5-5
Coker 70-16	42	28.7	50	31	88	5-6
Compact	44	29.7	50	30	94	5-18
Dubois	40	31.4	50	36	90	5-13
Norline	44	30.2	50	36	90	5-18
Pennlan	41	29.1	50	32	80	5-7
Walken	56	30.3	40	38	98	5-22
			Three-year Average 1974-76			
Coker 66-22	45	28.4	65	36	95	5-6
Coker 70-16	41	29.9	66	33	92	5-6
Compact	45	29.8	59	31	96	5-16
Dubois	34	30.7	58	37	93	5-13
Norline	41	30.7	58	38	93	5-17
Pennlan	40	30.4	54	34	87	5-6
Walken	50	29.8	38	39	99	5-22

Table 14.—Winter Oat Performance Trials at Murray, Ky., 1974-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1976 Results			
Coker 66-22	-	-	0	34	68	-
Coker 70-16	-	-	0	35	39	-
Coker 75-22	-	-	0	33	44	-
Compact	-	-	0	22	70	-
Cumberland	-	-	0	37	11	-
Dubois	-	-	0	38	28	-
Norline	-	-	0	32	45	-
Pennlan	-	-	0	38	51	-
Roanoke	-	-	0	37	20	-
Walken	-	-	0	28	48	-
Windsor	-	-	0	31	42	-
			Two-year Average 1975-76[1/]			
Coker 66-22	71	31.8	47	37	84	5-6
Coker 70-16	55	33.4	34	36	69	5-8
Compact	55	32.3	16	28	85	5-17
Dubois	46	32.3	15	39	64	5-13
Norline	48	32.7	34	36	72	5-17
Pennlan	65	33.8	34	38	76	5-8
Walken	41	29.8	15	33	74	5-22
			Three-year Average 1974-76			
Coker 66-22	-	-	31	34	89	-
Coker 70-16	-	-	22	32	80	-
Compact	-	-	10	25	90	-
Dubois	-	-	10	34	76	-
Norline	-	-	23	33	82	-
Pennlan	-	-	23	34	84	-
Walken	-	-	10	30	82	-

1/ The yield, test weight and date headed data are for the 1974 and 1975 two-year period.

Table 15.—Spring Oat Performance Trials at Lexington, Ky., 1975-76.

Variety	Yield	Test Weight	Lodging	Plant Height	Date Headed
	Bu/A	Lbs/Bu	%	In.	
			1976 Results		
Andrew	37	31.7	0	33	5-29
Clintford	27	32.6	0	25	6-1
Jaycee	51	33.5	0	27	5-28
Mo. 0205	37	33.2	0	33	6-2
Otee	52	34.5	0	28	5-30
			Two-year Average 1975-76		
Andrew	56	31.0	11	36	6-2
Clintford	44	32.1	0	28	6-3
Jaycee	54	27.2	1	30	6-1
Mo. 0205	52	30.6	0	35	6-4
Otee	54	28.5	0	30	6-3