Kentucky Small Grain Variety Trials–1977

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

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The 1976-77 climatic conditions for planting small grains were exceptionally poor which resulted in the reduction of small grain acreages. Also, many acres of small grains were destroyed because of the better economic advantage of replanting to corn or soybeans. The spring growing season was relatively good and relatively disease-free resulting in increased yields (Table 1).

Table 1.—Small Grain Harvested Acreage and Yields in Kentucky—1975-77.

	1977 Indicated		1976		1975	
	1,000 A Harvest	Yield Bu/A	1,000 A Harvest	Yield Bu/A	1,000 A Harvest	Yield Bu/A
Wheat	270	38	330	31	352	34
Oats	9	42	10	35	10	41
Barley	28	44	30	37	34	37
Rye	2	26	3	24	4	25
	309		373		400	

1/ July 12, 1977. From Crop Production, SRS, USDA, Washington, D.C.

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 five locations (Fig. 1) in the state (Lexington, Bowling Green, Elkton, Princeton, and Murray). Recommendations are revised

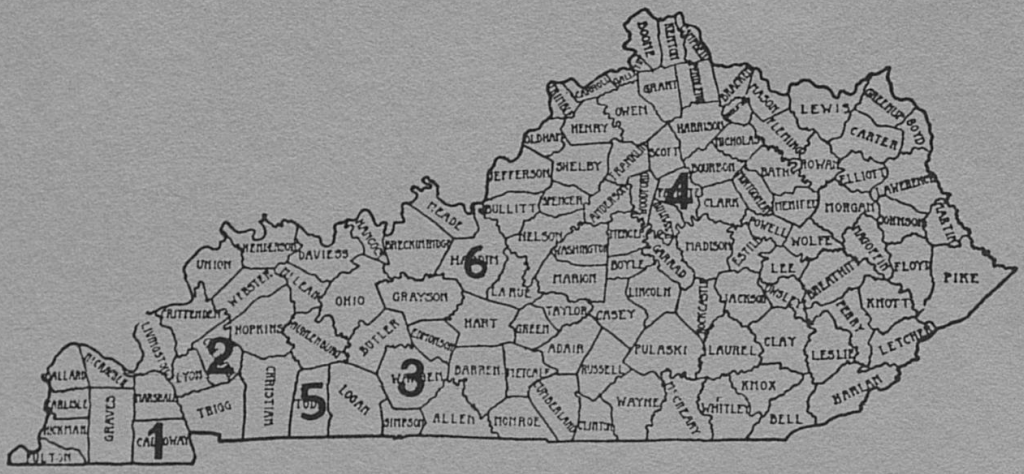

Fig. 1.—Testing locations of Kentucky small grain variety trials.

1. Murray—	Mr. Joe Pat Carraway, Carraway Farms, Inc.
2. Princeton—	West Kentucky Substation
3. Bowling Green—	Western Kentucky University Agriculture Department
4. Lexington—	Kentucky Agricultural Experiment Station
5. Elkton—	Mr. Owen Schlabach
6. Elizabethtown—	Mr. Allen Baugh

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 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.

DATA COLLECTED

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

Grain yield at Lexington was taken by cutting all four rows with a self-propelled combine. The grain yield at all other locations 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.

Table 2.—Planting Dates and Location of Kentucky Small Grain Evaluation Trials—1975-77.

	Location and Harvest Year												
	Lexington			Princeton			Murray			Bowling Green			Elkton
Crop	1977	1976	1975	1977	1976	1975	1977	1976	1975	1977	1976	1975	1977
Wheat	10-26	10-22	10-10	10-18	10-24	10-23	10-29	10-15	10-15	11-5	10-28	10-28	11-4
Barley	10-14	10-15	10-10	10-18	10-24	10-23	10-29	10-15	10-15	11-5	10-28	10-28	11-4
Winter Oats	10-8	10-7	10-10	10-18	10-24	10-23	10-29	10-15	10-15	11-5	10-28	10-28	11-4
Spring Oats	3-17	3-26	4-8	-	-	-	-	-	-	-	-	-	-

[1] The Lexington, Princeton and Bowling Green trials were planted on land not cropped the previous year. The trial at Murray was planted after soybeans. The trial at Elkton was planted after corn silage.

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.

Percent protein is reported on a whole seed basis as measured by the Udy dye binding technique. Concurrent consideration of

percent protein and yield should be made. The most desirable combination would be highest yield and highest percent protein, but this rarely occurs. High protein content is often a result of low yield and poor grain filling.

Grams per thousand seeds is a measure of seed size and seed quality. Planting rates can be adjusted by knowing seed size. Poor quality grain is usually low in weight per thousand seeds.

Disease and insect data are reported as relative amounts that occurred on the varieties at the time the readings were made. Disease and insect problems are often different in different years.

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.

1977 TEST CONDITIONS

The fall moisture conditions were limiting the first half of October. The latter half of October turned cool and some precipitation occurred. The cool October temperatures continued into the fall, never increasing enough to stimulate much fall growth. If the small grains were late planted, they possibly did not emerge until spring. The extremely cold temperatures generally coincided with good snow cover on the ground except for a few days in the later part of December. The spring growing season started with near normal soil moisture, but then April, May and June were droughty in some areas of the state.

The good ground snow cover prevented a lot of winter-killing of wheat and barley. Winter-killing in oats was severe. The disease picture was very mild or limited to localized areas. New strains of powdery mildew are increasing, causing the "Arthur-type" wheat to be less resistant to powdery mildew.

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.

RECOMMENDATIONS FOR 1978

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 small grain varieties is presented in Table 21. All varieties listed are eligible for certification in Kentucky.

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 3-8. Recommended varieties are Barsoy, Knob, Monroe 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 9-14. Recommended varieties are Arthur, Arthur 71, Abe, Oasis, Beau and Doublecrop.

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 15-19. Recommended varieties are Coker 66-22, Compact, Dubois, Norline, and Walken.

SPRING OAT VARIETIES

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) (Table 20).

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.

Acknowledgement 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; to Harold Vaught, Extension Area Agronomy Specialist, for his assistance in collecting field data at Bowling Green; and county agents Ted Howard, Marvin Davidson, and Jack Snyder for assistance in locating test sites.

Acknowledgement also is made to R.E. Stuckey, Department of Plant Pathology, for disease ratings on barley (Table 8) and other small grains.

Table 3.—Barley Performance Trials at Lexington, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Date Headed	g/1000 Seeds	Whole Seed % Protein
	Bu/A	Lbs/Bu	%	In.			
				1977 Results			
Barsoy	70	52.9	0	31	4-29	36.8	11.6
Dayton	72	47.2	9	40	5-2	34.9	11.5
Harrison	81	48.6	1	36	5-7	36.4	10.6
Henry	76	45.5	21	33	5-8	36.1	10.5
Kanby	70	47.3	4	36	5-6	32.2	10.8
Kentucky 1	74	47.5	13	44	5-9	30.9	10.8
Keowee	73	47.8	43	38	5-6	29.8	11.0
Knob	76	45.9	23	33	5-2	31.2	11.8
Lakeland	76	46.9	4	34	5-9	31.5	10.7
Maury	85	44.7	30	39	5-7	31.9	10.8
McNair 3004	77	49.1	0	32	5-2	31.1	11.3
Monroe	84	42.7	24	35	5-9	31.3	9.9
Paoli	67	45.8	45	31	5-6	28.1	11.6
Perry	84	49.7	0	36	5-3	32.5	10.5
Pike	76	50.8	0	30	4-28	35.9	10.7
Post	80	47.1	0	33	5-10	29.9	10.6
Surry	85	46.8	5	35	5-3	34.7	10.0
Volbar	93	47.3	4	40	5-4	38.5	10.1
				Two-year Average 1976-77			
Barsoy	67	52.0	0	32	4-23	34.3	11.5
Dayton	73	46.9	4	39	4-27	35.4	10.5
Harrison	73	48.6	1	35	5-4	36.3	10.6
Henry	79	47.2	11	34	5-1	36.7	9.8
Kanby	73	48.5	2	35	5-4	32.8	10.4
Kentucky 1	72	49.0	6	43	5-6	31.6	10.0
Keowee	82	49.6	21	38	5-1	31.6	10.0
Knob	72	47.2	11	33	4-27	32.0	10.8
Lakeland	75	48.0	2	34	5-5	32.0	10.3
Maury	83	46.1	15	35	5-2	32.3	10.0
McNair 3004	80	50.2	0	32	4-26	31.2	11.2
Monroe	81	45.7	12	34	5-5	32.2	9.6
Paoli	75	47.3	23	30	5-1	28.8	11.4
Pike	71	50.3	0	29	4-23	34.7	11.0
Surry	79	47.1	3	35	4-27	34.1	10.0
Volbar	93	48.4	2	39	5-1	37.6	10.0
				Three-year Average 1975-77			
Barsoy	62	49.5	24	33	4-24	29.5	12.0
Dayton	63	44.7	15	39	4-29	30.9	11.2
Harrison	65	47.7	5	37	5-5	33.2	10.6
Henry	74	46.2	30	35	5-2	33.0	10.3
Kanby	65	47.2	33	37	5-5	29.1	10.9
Keowee	75	48.4	43	38	5-2	27.8	10.7
Knob	64	45.6	30	34	4-29	27.9	11.7
Lakeland	68	46.9	25	36	5-6	28.5	10.8
Maury	75	45.1	28	36	5-4	29.0	10.4
Monroe	75	44.3	28	35	5-6	29.0	9.9
Paoli	67	46.2	40	32	5-2	26.0	11.8
Surry	74	45.5	27	37	4-29	30.6	10.4
Volbar	85	47.5	29	40	5-2	34.4	10.0

1/ All varieties had 100% survival.

Table 4.—Barley Performance Trials at Princeton, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Date Headed	g/1000 Seeds	Whole Seed % Protein
	Bu/A	Lbs/Bu	%	In.			
				1977 Results			
Barsoy	64	48.5	60	33	4-20	37.2	13.3
Dayton	41	39.7	96	40	5-1	35.4	14.0
Harrison	59	43.6	100	42	5-4	34.4	14.1
Henry	77	43.2	70	39	4-30	37.3	13.0
Kanby	45	42.0	95	39	5-2	33.7	14.7
Kentucky 1	20	35.8	100	39	5-6	31.5	16.1
Keowee	37	42.8	99	38	5-5	31.6	14.9
Knob	58	43.0	93	35	4-28	33.6	14.6
Lakeland	41	37.4	83	40	5-6	29.1	14.4
Maury	78	40.8	64	39	5-4	33.0	13.2
McNair 3004	60	45.5	84	36	4-27	32.0	14.0
Monroe	64	38.3	80	39	5-6	30.5	13.7
Paoli	35	37.9	100	37	5-1	28.2	14.9
Perry	57	44.9	69	38	4-28	34.8	14.9
Pike	67	47.5	96	34	4-21	36.8	13.7
Post	55	40.3	100	40	5-7	29.0	13.9
Surry	76	43.2	81	41	4-29	34.9	12.3
Volbar	65	39.2	98	43	4-30	37.2	14.2
				Two-year Average 1976-77			
Barsoy	57	46.9	44	36	4-16	27.9	
Dayton	36	38.7	91	39	4-25	28.2	
Harrison	51	43.4	84	40	4-30	30.4	
Henry	70	43.3	74	38	4-26	32.2	
Kanby	36	41.7	96	38	4-29	28.6	
Kentucky 1	23	36.8	100	37	5-4	27.6	
Keowee	39	42.7	89	39	4-30	27.0	
Knob	52	42.7	70	36	4-24	28.4	NO DATA
Lakeland	46	38.1	74	39	5-2	26.4	
Maury	70	40.8	77	37	5-1	29.1	
McNair 3004	49	46.1	87	34	4-23	25.6	
Monroe	65	39.3	79	38	5-2	31.3	
Paoli	35	39.1	71	36	4-28	24.5	
Pike	55	45.5	61	34	4-18	28.2	
Surry	65	43.0	89	40	4-24	30.0	
Volbar	60	39.4	87	43	4-26	33.4	
				Three-year Average 1975-77			
Barsoy	54	46.1	64	35	4-20		
Dayton	39	38.3	92	39	4-27		
Harrison	49	43.5	88	39	5-2		
Henry	73	43.0	68	38	4-29		
Kanby	38	41.4	97	38	5-1	NO DATA	NO DATA
Keowee	43	42.7	93	38	5-2		
Knob	47	41.8	78	35	4-27		
Lakeland	46	38.7	81	38	5-4		
Maury	69	40.6	82	38	5-3		
Monroe	69	39.2	85	38	5-3		
Paoli	40	39.4	81	35	4-30		
Surry	65	42.6	93	39	4-26		
Volbar	61	40.0	90	42	4-29		

1/ All varieties had 100% survival.

Table 5.—Barley Performance Trials at Bowling Green, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed	g/1000 Seeds
	Bu/A	Lbs/Bu	%	In.	%		
			1976 Results				
Barsoy	55	43.6	0	33	100	4-13	22.5
Dayton	46	37.4	5	34	100	4-21	24.4
Harrison	38	43.4	0	32	95	4-28	28.0
Henry	53	41.9	0	32	100	4-24	26.2
Kanby	48	42.2	5	36	100	4-30	25.1
Kentucky 1	34	42.4	85	38	100	5-3	26.1
Keowee	42	43.4	0	34	100	4-26	23.7
Knob	43	41.9	0	31	100	4-21	23.6
Lakeland	40	42.8	0	32	100	4-29	24.5
McNair 3004	56	44.0	0	33	100	4-21	23.2
Monroe	52	41.1	0	34	100	4-28	25.4
Paoli	37	39.9	0	26	100	4-26	21.8
Pike	49	41.6	0	27	100	4-17	23.1
Surry	58	42.4	0	34	100	4-20	25.5
Volbar	73	42.5	0	41	100	4-24	30.2
			Two-year Average 1974 and 1976				
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	NO DATA
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	

1/ The 1977 trial at Bowling Green was destroyed by standing water. The 1975 trial at Bowling Green was destroyed by hail.

Table 6.—Barley Performance Trials at Murray, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed	g/1000 Seeds	Whole Seed % Protein
	Bu/A	Lbs/Bu	%	In.	%			
				1977 Results				
Barsoy	57	46.8	75	32	86	4-21	35.2	13.9
Dayton	50	41.9	53	41	79	5-1	33.8	12.7
Harrison	60	44.8	83	40	95	5-2	33.6	12.8
Henry	87	46.3	5	38	91	4-29	39.2	10.9
Kanby	52	42.5	19	38	99	5-1	31.9	12.8
Kentucky 1	30	40.0	99	43	100	5-4	29.7	15.3
Keowee	54	47.0	48	37	91	5-2	31.7	13.3
Knob	71	43.0	46	36	90	4-26	33.5	12.6
Lakeland	52	43.6	11	40	98	5-4	31.0	12.4
Maury	80	43.1	40	39	95	5-3	33.9	11.9
McNair 3004	75	46.2	100	35	95	4-25	31.9	12.7
Monroe	76	38.2	69	39	99	5-4	30.0	12.6
Paoli	51	42.6	98	34	91	5-2	31.7	12.5
Perry	67	43.6	21	39	100	4-27	34.5	13.3
Pike	67	45.7	98	32	96	4-20	35.8	13.1
Post	56	44.0	69	37	95	5-6	28.9	13.3
Surry	84	43.3	11	38	90	4-28	35.3	12.1
Volbar	78	42.8	68	42	91	4-28	37.2	13.0

(continued)

Table 6.—(continued)

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed	g/1000 Seeds	Whole Seed % Protein
	Bu/A	Lbs.Bu	%	In.	%			
				Two-year Average 1976-77				
Barsoy	51	46.6	38	31	81	4-15	29.2	
Dayton	41	42.2	26	36	72	4-25	30.1	
Harrison	39	44.7	41	34	78	5-1	30.7	
Henry	68	46.4	3	34	83	4-25	33.0	
Kanby	43	43.2	9	35	89	4-28	29.4	
Kentucky 1	26	41.0	49	39	78	5-1	27.8	
Keowee	48	47.0	24	34	85	4-27	28.1	
Knob	59	43.6	23	31	81	4-22	29.8	
Lakeland	41	44.0	6	33	89	4-30	28.6	
Maury	71	43.7	20	36	90	4-28		NO DATA
McNair 3004	60	46.5	50	33	80	4-21	28.2	
Monroe	59	39.6	34	33	88	4-30	27.9	
Paoli	33	42.7	49	29	83	4-29	26.6	
Pike	52	45.7	49	29	83	4-16	29.7	
Surry	70	43.8	6	33	86	4-21	30.5	
Volbar	63	43.0	34	38	84	4-24	34.2	
				Three-year Average 1975-77				
Barsoy	50	46.0	30	31	88	4-16		
Dayton	42	41.4	19	34	81	4-26		
Harrison	38	44.4	28	32	85	5-1		
Henry	63	45.5	2	33	88	4-28		
Kanby	44	43.2	9	34	93	4-29		
Keowee	49	46.5	17	33	90	4-28	NO DATA	NO DATA
Knob	53	43.1	15	30	88	4-24		
Lakeland	40	43.9	4	33	93	5-1		
Maury	68	43.2	13	35	93	4-30		
Monroe	61	39.6	23	32	92	5-1		
Paoli	36	42.6	34	30	89	4-29		
Surry	66	43.1	4	33	90	4-23		
Volbar	69	43.1	23	38	90	4-26		

Table 7.—Barley Performance Trials at Elkton, Ky., 1977.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed	g/1000 Seeds	Whole Seed % Protein
	Bu/A	Lbs/Bu	%	In.	%			
				1977 Results				
Barsoy	32	41.8	100	33	29		32.4	12.9
Dayton	32	33.3	99	40	14		30.9	14.1
Harrison	41	39.9	100	42	68		33.6	13.4
Henry	53	40.0	100	39	43		35.4	12.9
Kanby	27	38.2	98	39	84		31.3	14.7
Kentucky 1	24	39.8	100	42	81		30.8	15.9
Keowee	34	38.3	91	38	55		30.3	14.6
Knob	39	42.3	95	37	53		33.2	14.4
Lakeland	38	38.5	78	39	65		29.9	14.1
Maury	50	37.7	100	40	50		29.5	14.6
McNair 3004	31	38.5	100	34	16	NO DATA	29.2	14.7
Monroe	36	35.3	100	38	56		28.5	13.8
Paoli	24	31.6	100	33	80		27.0	17.8
Perry	43	40.5	78	41	84		33.1	15.0
Pike	38	43.0	99	33	76		34.8	15.2
Post	33	36.7	100	38	66		28.8	15.3
Surry	43	37.8	100	38	45		31.8	14.3
Volbar	53	37.6	98	45	44		36.8	13.7

Table 8.—Disease Ratings on Barley Varieties Tested in 1977.

Variety	Disease		
	H. sativum (Barley Spot Blotch)	R. secalis (Barley Scald)	H. gramineum (Barley Stripe)
	Rating [2]	Rating [2]	Present
Barsoy	2	28	no
Dayton	10	18	yes
Harrison	5	6	yes
Henry	20	6	yes
Kanby	36	15	yes
Ky 1	23	22	yes
Keowee	6	14	no
Knob	8	30	no
Lakeland	9	3	yes
Maury	12	1	no
McNair 3004	5	11	no
Monroe	11	13	yes
Paoli	34	13	yes
Perry	20	1	no
Pike	22	28	no
Post	2	16	no
Surry	18	1	yes
Volbar	23	4	yes

[1] Barley Yellow Dwarf Virus, mildew and leaf rust were not evident in 1977. Barley smuts can be controlled by planting disease free seed so no smut data were collected.

[2] Ratings are only relative among varieties. The lowest number indicates the least disease and the highest number the most disease. Rating values were obtained by summing ten individual plot ratings from all locations. Individual plot ratings were on a scale of 0 (no disease) to 4 (abundant disease symptoms).

Table 9.—Wheat Performance Trials at Lexington, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1977 Results			
Abe	54	57.9	0	37	70	5-10
Ark. 38-1	46	58.3	0	41	56	5-10
Arthur	48	58.9	1	37	59	5-8
Arthur 71	43	60.0	0	36	46	5-11
Beau	50	59.4	0	33	51	5-11
Blueboy II	37	53.1	0	36	60	5-14
Centurk*	48	59.1	0	39	83	5-15
Coker 68-15	45	58.9	0	31	79	5-10
Coker 747	48	58.6	2	33	70	5-10
Coker 76-22	61	53.9	1	29	81	5-15
Coker 76-35	49	59.1	0	31	65	5-14
Doublecrop	45	59.4	0	35	79	5-4
Frederick	45	55.6	0	40	51	5-10
Funks W-504	47	59.0	0	38	68	5-8
Improved Triumph*	41	59.2	28	42	69	5-8
Knox 62	45	59.8	10	41	48	5-9
McNair 1813	50	59.0	2	32	48	5-9
McNair 1003	60	53.9	2	34	73	5-11
McNair 3069	55	54.6	0	31	63	5-15

(continued)

Table 9.—(continued)

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
McNair 4823	39	56.8	1	30	48	5-15
Mo W8656	40	56.2	0	35	48	5-11
Oasis	50	60.2	0	38	68	5-11
Ruler	48	59.1	0	34	60	5-19
Scout*	50	60.6	57	43	81	5-14
Sullivan	44	59.9	0	36	70	5-9
Voris B7340	50	58.7	0	37	70	5-9
		Two-year Average 1976-77				
Abe	40	57.8	0	32	76	5-10
Arthur	38	58.8	0	33	73	5-11
Arthur 71	35	59.5	0	33	69	5-11
Beau	41	59.5	0	32	63	5-12
Blueboy II	32	53.2	0	34	77	5-15
Coker 68-15	39	59.3	0	31	83	5-14
Coker 747	41	58.9	1	30	80	5-12
Doublecrop	33	59.6	0	33	82	5-9
Frederick	40	56.0	0	40	68	5-14
Funks W-504	36	59.1	0	36	75	5-13
Knox 62	35	59.6	4	39	69	5-12
McNair 1813	36	58.6	1	31	62	5-11
McNair 1003	46	54.1	1	32	82	5-13
McNair 4823	38	57.6	0	30	70	5-15
Mo W8656	33	56.1	0	33	66	5-12
Oasis	39	59.6	0	34	81	5-12
Ruler	42	59.2	0	34	77	5-18
		Three-year Average 1975-77				
Abe	45	58.5	3	38	88	5-12
Arthur	43	59.3	0	37	82	5-12
Arthur 71	40	58.8	14	37	80	5-12
Blueboy II	34	51.8	0	37	84	5-16
Coker 747	43	56.8	18	33	87	5-13
Frederick	41	55.8	3	43	78	5-17
Funks W-504	36	56.7	8	38	84	5-13
Knox 62	33	57.1	35	42	80	5-14
McNair 1003	43	53.2	1	35	88	5-14
McNair 4823	39	55.0	9	34	80	5-17
Oasis	41	59.3	5	37	87	5-13

* Hard Red Winter Wheat

Table 10.—Wheat Performance Trials at Princeton, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
		1977 Results				
Abe	56	55.7	25	39	100	5-1
Ark. 38-1	68	55.2	14	46	100	5-1
Arthur	55	57.8	8	41	100	4-30
Arthur 71	52	58.6	26	40	100	5-1
Beau	57	58.5	3	38	100	5-2

(continued)

Table 10.—(continued)

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
Blueboy II	60	53.4	21	43	100	5-3
Centurk*	43	55.8	93	43	100	5-7
Coker 68-15	52	53.9	1	36	100	5-1
Coker 747	54	55.3	44	36	100	5-1
Coker 76-22	42	47.6	84	34	100	5-7
Coker 76-35	63	56.5	15	33	100	5-4
Doublecrop	58	56.7	23	40	100	4-23
Frederick	57	54.6	54	47	100	5-1
Funks W-504	59	57.3	25	41	100	5-1
Improved Triumph*	28	55.2	86	42	100	4-29
Knox 62	46	57.3	74	45	100	5-2
McNair 1813	49	55.2	4	39	100	4-30
McNair 1003	72	52.6	33	38	100	5-2
McNair 3069	73	54.1	0	36	100	5-5
McNair 4823	58	53.2	1	38	100	5-8
Mo W8656	66	53.8	5	38	100	4-29
Oasis	58	58.0	34	40	100	5-2
Ruler	42	53.6	81	44	100	5-9
Scout*	26	43.5	96	44	100	5-10
Sullivan	52	57.6	5	39	100	4-30
Voris B7340	65	60.6	29	41	100	5-1
		Two-year Average 1976-77				
Abe	37	54.6	13	39	100	4-26
Arthur	40	56.2	4	40	100	4-25
Arthur 71	38	56.5	13	41	100	4-26
Beau	39	57.2	1	39	100	4-27
Blueboy II	46	53.3	11	43	100	4-29
Coker 68-15	41	54.0	1	39	100	4-27
Coker 747	41	55.7	22	38	100	4-28
Doublecrop	51	55.1	11	40	100	4-19
Frederick	47	55.3	27	46	100	4-26
Funks W-504	42	56.1	13	40	100	4-26
Knox 62	37	55.9	37	45	100	4-27
McNair 1813	30	55.2	2	39	100	4-25
McNair 1003	51	50.5	16	38	100	4-28
McNair 4823	51	53.4	1	39	100	5-7
Mo W8656	54	54.7	3	40	100	4-25
Oasis	39	55.6	17	42	100	4-27
Ruler	34	53.7	41	44	100	5-4
		Three-year Average 1975-77				
Abe	38	55.2	15	39	100	4-30
Arthur	39	56.0	18	40	100	4-30
Arthur 71	36	56.4	23	40	100	4-30
Blueboy II	43	51.8	8	42	100	5-2
Coker 747	38	54.5	44	37	100	5-1
Frederick	42	55.0	18	45	100	4-30
Funks W-504	34	55.2	39	41	100	4-29
Knox 62	32	54.8	52	45	100	5-1
McNair 1003	44	48.8	23	38	100	5-2
McNair 4823	47	49.2	24	39	100	5-10
Oasis	38	55.9	20	42	100	5-1

* Hard Red Winter Wheat

Table 11.—Wheat Performance Trials at Bowling Green, Ky., 1976-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1977 Results			
Abe	49	58.1	0	33	76	5-5
Ark. 38-1	52	59.9	0	43	61	5-7
Arthur	47	60.6	0	37	69	5-5
Arthur 71	50	59.0	0	36	63	5-6
Beau	52	61.1	0	35	94	5-7
Blueboy II	46	54.1	0	38	61	5-9
Centurk*	39	58.7	38	41	95	5-11
Coker 68-15	49	59.8	0	32	88	5-5
Coker 747	47	60.7	0	41	88	5-6
Coker 76-22	51	55.2	0	32	83	5-10
Coker 76-35	52	58.9	0	30	80	5-10
Doublecrop	42	61.1	0	33	89	5-1
Frederick	49	57.0	0	44	83	5-7
Funks W-504	53	60.3	0	40	81	5-6
Improved Triumph*	40	62.5	0	39	80	5-4
Knox 62	45	61.3	3	43	48	5-6
McNair 1813	39	58.7	0	35	55	5-6
McNair 1003	48	56.5	0	36	63	5-8
McNair 3069	56	58.3	0	33	80	5-11
McNair 4823	44	60.0	0	34	84	5-12
Mo W8656	45	57.5	0	34	74	5-5
Oasis	41	59.4	0	40	71	5-7
Ruler	47	60.2	0	39	84	5-13
Scout*	37	59.6	0	45	91	5-12
Sullivan	46	60.1	0	36	83	5-5
Voris B7340	48	58.6	0	34	84	5-5
			Two-year Average 1976-77			
Abe	44	56.6	0	34	88	4-30
Arthur	43	58.0	0	38	84	4-29
Arthur 71	45	56.7	0	37	81	4-30
Beau	45	58.4	0	35	97	5-1
Blueboy II	38	53.7	0	38	81	5-2
Coker 68-15	41	56.6	0	35	94	4-30
Coker 747	40	56.6	0	37	94	4-30
Doublecrop	42	58.7	0	35	94	4-25
Frederick	43	54.8	0	42	91	4-30
Funks W-504	45	58.1	0	38	91	4-29
Knox 62	41	58.3	1	41	74	4-29
McNair 1813	37	56.5	0	36	78	4-29
McNair 1003	42	53.6	0	35	81	5-1
McNair 4823	37	57.1	0	34	92	5-8
Mo W8656	45	55.7	0	37	87	4-29
Oasis	45	57.8	0	38	86	5-1
Ruler	40	58.0	0	39	92	5-9

1/ 1975 test was destroyed by hail

* Hard Red Winter Wheat

Table 12.—Wheat Performance Trials at Murray, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
1977 Results						
Abe	59	61.5	0	38	100	4-29
Ark. 38-1	46	55.6	0	39	100	4-30
Arthur	57	61.4	0	39	100	4-28
Arthur 71	57	61.7	0	38	100	4-29
Beau	58	61.8	0	39	100	4-30
Blueboy II	57	53.2	0	41	100	5-3
Centurk*	37	57.0	68	40	100	5-5
Coker 68-15	59	59.4	23	35	100	4-29
Coker 747	58	61.2	3	34	100	4-30
Coker 76-22	53	51.7	23	34	100	5-5
Coker 76-35	55	58.4	0	33	100	5-2
Doublecrop	52	60.9	0	36	100	4-22
Frederick	49	55.4	0	45	100	4-28
Funks W-504	55	60.1	5	40	100	4-29
Improved Triumph*	40	59.3	80	37	100	4-28
Knox 62	45	60.0	94	43	100	4-30
McNair 1813	57	58.4	3	37	100	4-27
McNair 1003	71	56.1	3	37	100	5-1
McNair 3069	68	55.5	0	35	100	5-2
McNair 4823	34	50.6	0	36	100	5-7
Mo W8656	57	57.6	10	37	100	4-29
Oasis	52	60.9	3	37	100	5-2
Ruler	40	53.3	0	42	100	5-9
Scout*	32	56.3	59	42	100	5-8
Sullivan	59	61.2	0	37	100	4-27
Voris B7340	57	60.2	0	37	100	4-28
Two-year Average 1976-77						
Abe	56	59.5	0	36	91	4-23
Arthur	53	59.3	0	38	91	4-22
Arthur 71	51	59.6	0	36	91	4-23
Beau	48	60.1	0	36	90	4-25
Blueboy II	50	55.1	0	38	92	4-26
Coker 68-15	47	58.1	11	35	93	4-24
Coker 747	52	59.2	1	34	93	4-24
Doublecrop	50	58.9	0	36	92	4-17
Frederick	50	56.4	0	44	95	4-24
Funks W-504	52	59.5	3	38	90	4-22
Knox 62	45	59.4	47	41	90	4-24
McNair 1813	48	58.0	1	36	91	4-21
McNair 1003	55	54.8	1	36	89	4-25
McNair 4823	32	54.5	0	35	92	5-4
Mo W8656	53	56.5	5	36	89	4-24
Oasis	48	59.6	1	36	93	4-25
Ruler	35	56.2	0	39	91	5-5
Three-year Average 1975-77						
Abe	52	59.3	0	36	94	4-27
Arthur	50	59.0	0	37	94	4-26
Arthur 71	50	59.4	0	36	94	4-27
Blueboy II	51	55.2	0	39	95	4-30
Coker 747	51	58.6	1	33	95	4-28
Frederick	46	57.3	0	45	97	5-1
Funks W-504	47	58.6	2	39	93	4-26
Knox 62	45	59.3	31	42	93	4-28
McNair 1003	52	54.2	1	35	93	4-28
McNair 4823	36	54.3	0	35	95	5-6
Oasis	49	59.3	1	36	95	4-28

* Hard Red Winter Wheat

Table 13.—Wheat Performance Trials at Elkton, Ky., 1977.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed
	Bu/A	Lbs/Bu	%	In.	%	
			1977 Results			
Abe	51	56.7	84	40	100	
Ark. 38-1	44	54.3	46	43	100	
Arthur	49	57.0	76	42	100	
Arthur 71	41	56.6	95	40	100	
Beau	49	57.8	29	40	100	
Blueboy II	46	50.6	59	42	100	
Centurk*	32	53.7	99	42	100	
Coker 68-15	56	55.6	75	36	100	
Coker 747	49	57.0	76	36	100	
Coker 76-22	53	58.1	99	34	100	
Coker 76-35	50	54.4	39	34	100	NO DATA
Doublecrop	44	56.9	59	38	100	
Frederick	41	52.6	21	44	100	
Funks W-504	35	54.4	94	44	100	
Improved Triumph*	24	55.6	100	41	100	
Knox 62	28	55.6	100	44	100	
McNair 1813	40	53.7	94	38	100	
McNair 1003	62	51.3	50	39	100	
McNair 3069	69	52.4	11	36	100	
McNair 4823	42	50.0	34	37	100	
Mo W8656	42	54.3	61	40	100	
Oasis	47	58.4	68	41	100	
Ruler	36	54.5	49	40	100	
Scout*	29	55.8	99	45	100	
Sullivan	34	56.9	88	42	100	
Voris B7340	45	56.7	91	41	100	

* Hard Red Winter Wheat

The Elizabethtown location was done with the cooperation of Mr. Allen Baugh. The experiment was planted following corn on October 18, 1976 and harvested July 4, 1977. Each plot was drilled and harvested using Mr. Baugh's farm equipment. Each plot was one-quarter acre in size and each entry was replicated three times. Each plot was harvested, weighted and sub-sampled. A test weight was obtained from the sub-sample. Means were calculated and are shown in Table 14.

Doublecrop has lower test weight and yield than expected. The delayed harvesting of Doublecrop by approximately two weeks because of rainy weather and the waiting to harvest later maturing plots at the same time probably reduced yield and quality.

Table 14.—Wheat Performance Trials at Elizabethtown, Ky., 1977.

Variety	Yield	Test Weight
	Bu/A	Lbs/Bu
	1977 Results	
Abe	60	57.3
Arthur	54	56.8
Arthur 71	55	58.1
Beau	53	58.0
Doublecrop	37	56.0
Oasis	56	57.3

Table 15.—Winter Oat Performance Trials at Lexington, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed	g/1000 Seeds	Whole Seed % Protein
	Bu/A	Lbs/Bu	%	In.	%			
				1977 Results				
Coker 66-22	75	32.6	17	27	48	5-14	32.7	17.0
Coker 70-16	93	34.3	50	27	68	5-14	28.3	15.1
Coker 75-22	63	32.6	0	19	33	5-18	28.3	17.2
Coker 76-30	91	33.3	60	28	70	5-12	28.4	15.0
Compact	56	32.9	0	21	22	5-22	24.0	19.8
Cumberland	58	31.9	0	25	28	5-19	35.3	17.3
Dubois	75	33.5	20	29	53	5-17	30.8	18.0
Ky 67-695	94	34.8	7	29	75	5-19	29.0	16.3
Norline	73	32.5	0	28	43	5-22	35.7	19.5
Pennlan	68	33.3	0	26	23	5-17	31.6	16.8
Pennwin	49	28.8	0	27	23	5-24	28.5	17.9
Walken	* Seed of Walken had poor germination and data considered unreliable.							
Windsor	78	33.3	23	25	40	5-12	32.3	18.4
				Two-year Average 1976-77				
Coker 66-22	79	35.2	7	29	73	5-11	32.0	16.8
Coker 70-16	88	36.1	21	27	84	5-12	26.9	15.2
Coker 75-22	80	35.5	0	21	63	5-15	27.2	16.0
Compact	63	35.2	0	23	60	5-18	23.8	18.6
Cumberland	67	33.9	0	27	59	5-17	34.2	16.2
Dubois	68	35.4	9	30	76	5-15	28.4	18.2
Ky 67-695	83	36.3	2	29	88	5-16	27.3	16.6
Norline	73	34.8	0	31	71	5-20	31.8	18.7
Pennlan	75	35.5	0	27	51	5-14	28.4	16.0
Walken	* Seed of Walken had poor germination and data considered unreliable.							
Windsor	81	35.1	10	28	66	5-9	31.4	17.3
				Three-year Average 1975-77				
Coker 66-22	76	35.0	41	32	82	5-13	27.8	16.8
Coker 70-16	86	35.2	50	30	89	5-13	24.0	15.4
Compact	62	34.5	36	26	73	5-20	21.5	18.7
Dubois	67	35.1	42	33	84	5-17	25.5	18.2
Norline	69	34.1	36	33	81	5-21	28.1	18.6
Pennlan	75	35.2	36	31	68	5-15	25.0	16.1
Walken	* Seed of Walken had poor germination and data considered unreliable.							

Table 16.—Winter Oat Performance Trials at Princeton, Ky.

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 [2]			
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 1977 test at Princeton winterkilled.

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

Table 17.—Winter Oat Performance Trials at Bowling Green, Ky.

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

1/ The 1977 test at Bowling Green was destroyed by standing water.

Table 18.—Winter Oat Performance Trials at Murray, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed	g/1000 Seeds	Whole Seed % Protein
	Bu/A	Lbs/Bu	%	In.	%			
				1977 Results				
Coker 66-22	51	38.1	73	38	38	--	31.8	17.6
Coker 70-16	72	30.8	46	38	58	5-7	27.0	20.0
Coker 75-22	37	28.0	13	29	30	--	26.8	19.1
Coker 76-30	77	32.9	66	38	68	5-8	27.0	17.4
Compact	46	31.5	45	35	35	--	23.5	22.3
Cumberland	37	28.0	0	6	26	5-13	33.5	16.3
Dubois	40	29.4	30	39	35	--	28.0	20.1
Ky 67-695	73	29.6	13	38	65	5-12	27.6	19.4
Norline	49	29.9	15	42	43	5-14	29.7	22.7
Pennlan	37	30.4	28	38	20	--	27.2	18.4
Pennwin	37	28.1	18	36	26	--	25.3	19.3
Walken	* Seed of Walken had poor germination and data considered unreliable.							
Windsor	65	39.7	66	36	53	5-7	27.5	18.8
				Two-year Average 1976-77				
Coker 66-22	NO DATA FOR 1976	NO DATA FOR 1976	NO LODGING IN 1976	36	53	NO DATA FOR 1976	NO DATA FOR 1976	NO DATA FOR 1976
Coker 70-16				36	48			
Coker 75-22				31	37			
Compact				28	52			
Cumberland				36	18			
Dubois				38	32			
Ky 67-695				34	60			
Norline				37	44			
Pennlan				38	36			
Windsor				34	47			
				Three-year Average 1975-77 [1]				
Coker 66-22	64	33.9	55	37	NO WINTER-KILL, 1975	--	NO DATA FOR 1975	NO DATA FOR 1975
Coker 70-16	61	32.5	38	37		5-9		
Compact	52	32.0	26	30		--		
Dubois	44	31.3	20	39		--		
Norline	48	31.8	28	38		5-17		
Pennlan	56	32.7	32	38		--		

[1] The yield, test weight and date headed data are for the 1974, 1975 and 1977 period.

Table 19.—Winter Oat Performance Trials at Elkton, Ky., 1977.

Variety	Yield	Test Weight	Lodging	Plant Height	Survival	Date Headed	g/1000 Seeds	Whole Seed % Protein
	Bu/A	Lbs/Bu	%	In.	%			
				1977 Results				
Coker 66-22	28	31.4	0	31	43		35.4	20.5
Coker 70-16	42	32.5	0	33	35		31.1	19.7
Coker 75-22	33	30.4	0	24	23		30.1	21.0
Coker 76-30	50	32.1	0	35	50		30.1	20.1
Compact	31	29.3	0	28	15		23.9	23.1
Cumberland	35	25.6	0	33	33	NO DATA	31.2	21.6
Dubois	26	29.9	0	33	25		29.7	21.6
Ky 67-695	44	31.2	0	32	40		29.6	20.3
Norline	36	30.3	0	36	43		33.4	23.8
Pennlan	35	32.6	0	35	25		29.2	19.7
Pennwin	28	26.9	0	36	25		27.7	21.1
Walken	* Seed of Walken had poor germination and data considered unreliable.							
Windsor	39	30.8	0	31	45		31.2	22.1

Table 20.—Spring Oat Performance Trials at Lexington, Ky., 1975-77.

Variety	Yield	Test Weight	Lodging	Plant Height	Date Headed	g/1000 Seeds	Whole Seed % Protein
	Bu/A	Lbs/Bu	%	In.			
			1977 Results				
Andrew	65	32.9	78	31	5-21	29.7	18.4
Mo 0205	85	33.8	19	33	5-23	23.1	18.6
Clintford	76	36.1	4	28	5-23	33.1	18.6
Jaycee	86	34.0	11	28	5-21	31.0	19.1
Otee	83	34.6	6	28	5-21	24.9	21.9
Multiline E77	81	33.5	30	31	5-19	31.5	18.8
			Two-year Average 1976-77				
Andrew	51	32.7	39	32	5-25		
Clintford	51	35.4	2	27	5-27		
Jaycee	69	33.9	6	27	5-25	NO DATA	NO DATA
Mo 0205	61	33.7	9	33	5-27		
Multiline E77	51	32.0	15	30	5-22		
Otee	68	34.6	3	28	5-26		
			Three-year Average 1975-77				
Andrew	59	31.9	33	34	5-29		
Clintford	55	33.9	1	28	5-30		
Jaycee	65	30.2	5	29	5-28		
Mo 0205	63	32.0	6	35	5-31		
Otee	64	31.2	2	30	5-29		

Table 21.—Characteristics of Recommended 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	Very Good	Medium	Early	Excellent	Excellent	Good	Excellent	Fair
Arthur	No	Indiana	1968	Good	Medium	Early	Excellent	Good	Good	Good	Fair
Arthur 71	Yes	Indiana	1971	Good	Medium	Early	Excellent	Excellent	Good	Excellent	Fair
Beau	Yes	Indiana	1975	Excellent	Medium	Early	Excellent	Excellent	Good	Excellent	Fair
Doublecrop	No	Arkansas	1975	Good	Medium	Very Early	Excellent	Good	Good	Very Good	Fair
Oasis	Yes	Indiana	1973	Good	Medium	Early	Excellent	Excellent	Good	Excellent	Very 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	No	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[1]	Origin	Date of Release	Straw Strength	Relative Height	Relative Maturity	Winter Hardiness	Loose Smut
Barsoy	No	Kentucky	1966	Excellent	Short	Very early	Good	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

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