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Kentucky Small Grain Variety Trials—1981

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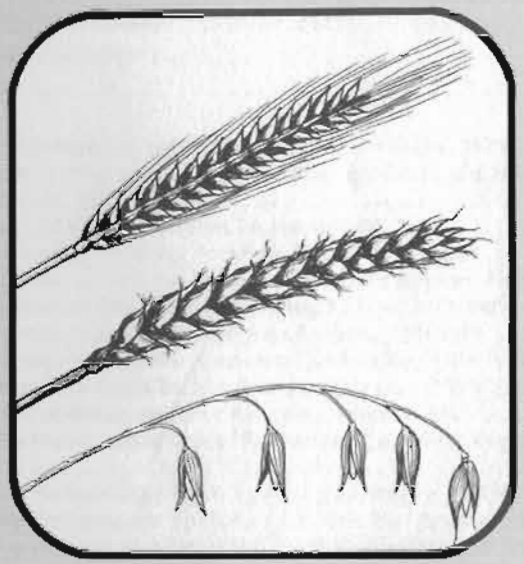
Progress Report 257



UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE
Agricultural Experiment Station • Department of Agronomy
Lexington

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Kentucky Small Grain Variety Trials 1981

V. C. Finkner, D. A. Van Sanford, C. R. Tutt, K. M. Tichenor, and W. H. Roberts

In 1981, Kentucky produced more wheat than at any other time this century. A record 29.4 million bushels were produced, easily eclipsing the record 19.9 million bushels produced in 1900. The average 1981 yield of 42 bu/a replaced the previous record of 40 bu/a set in 1971. Barley acreage also increased for the third year in a row.

Table 1.—Small Grain Harvested Acreage and Yields in Kentucky 1979-1981.*

	1981		1980		1979	
Crop	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A	Harvest 1000 A	Yield Bu/A
Wheat	700	42	350	39	290	38
Barley	32	52	28	53	25	50
Oats	7	39	6	44	8	41
Rye	4	25	3	26	4	24

*November 10, 1981, Kentucky Crop and Livestock Reporting Service

Small grain performance tests were conducted in six of the seven agroclimatic regions of Kentucky (Fig. 1). Agricultural areas within each region are considered to have similar soil types and climatic conditions. Each region having a substantial acreage of a small grain commodity will have a trial conducted in that region for that commodity.

Acknowledgement is made to William Green, William Hendrick, Tom Amos, and Jack Snyder, county Extension agents for agriculture, for assistance in locating test sites and collecting data.

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

Region	Location	Cooperator	Crop Tested
1. Purchase	Mayfield	Mr. Paul Payne	Wheat
2. Western Coal Field	Princeton (Sandstone soil)	Research & Education Center—Princeton	Barley, Wheat
3. Ohio Valley	Henderson	Mr. Walter Gooch	Wheat
4. Bluegrass	Lexington	Kentucky Agricultural Experiment Station	Barley, Winter Oats, Wheat, Spring Oats
5. Southern Tier	Hopkinsville Princeton (Limestone soil)	Mr. Harry Young Research & Education Center—Princeton	Barley, Wheat Barley, Winter Oats, Wheat
6. North Central	Elizabethtown	Mr. Allen Baugh	Barley, Wheat

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 six locations (Fig. 1) in the state. Suggested varieties are revised each

year because of the availability of new varieties, improvements in production practices, and continually changing disease and insect hazards.

EXPERIMENTAL METHODS

The plots were planted with a specially built multi-row cone seeder. Each plot consisted of four or six rows to form a plot 4 feet wide, which was later trimmed to 10 feet in length. Each variety was grown in four replications, and the data presented are the average response from the four replications of 40 square feet harvested with a small plot combine. Planting dates of all trials for the past 3 years are listed in Table 2.

Table 2.—Region, Location, Preceding Crop and Planting Dates of Kentucky Small Grain Trials 1979-81.

Region	Location	Preceding Crop	Crop	Planting Date 1981	1980	1979
Purchase	Mayfield	Soybeans	Wheat	10/22	10/17	—
	Murray	Soybeans	Wheat	—	—	10/12
			Barley	—	—	10/12
			Winter Oats	—	—	10/12
Western Coal Field	Princeton (Sandstone soil)	None	Barley	10/6	10/16	—
			Winter Oats	10/6	10/16	—
			Wheat	10/6	10/16	—
Ohio Valley	Henderson	Soybeans	Wheat	10/13	10/19	10/16
Bluegrass	Lexington	None	Barley	10/7	10/17	10/18
			Winter Oats	10/2	10/9	10/6
			Spring oats	4/3	4/3	3/22
			Wheat	10/9	10/15	10/10
Southern Tier	Hopkinsville	Corn	Barley	10/10	10/18	—
			Wheat	10/10	10/18	—
	Princeton (Limestone soil)	None	Barley	10/7	10/11	10/10
			Winter Oats	10/7	10/11	10/4
			Wheat	10/16	10/11	10/17
North Central	Elizabethtown	Corn	Barley	10/15	10/18	10/20
			Wheat	10/15	10/18	10/20

In some instances, uncontrollable factors—such as excessive rainfall, winter killing, high winds, hail, grazing cattle, etc.—adversely affected an experiment so that the results were judged unreliable. When this occurred, results are not given for that location and year. Data averaged over a period of years gives a more accurate picture of varietal performance than does annual data.

DATA COLLECTED

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

Grain yield of most plots was taken by cutting all rows with a self-propelled combine. The grain yields for barley and oats at Lexington and barley at Elizabethtown were taken by cutting each plot and threshing grain with a Vogel type 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 the grain. The higher the test weight, the higher the quality and market value, unless the grain has been down-graded because of another quality factor.

Lodging was recorded as the percentage of the total plants lying on the ground or leaning at a 45-degree angle from the vertical when the grain was mature. The term "maturity" as used in this report refers to the date the grain was ready to be combine harvested.

Plant height was recorded as the number of centimeters from the ground to the tip of the upright grain head, and converted to inches.

Survival was recorded as the percentage of plants estimated to have survived the winter. This is a measure of winterhardiness and is an important factor to consider when selecting a variety.

Heading date is reported as the date when 50% of the heads had emerged from the plants in each plot. This is also a measure of maturity and is important when selecting a variety for use in a double-cropping system.

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 variety reported to be 50% lodged does not imply that only 50% of the grain could be harvested. With good equipment, almost all of the grain can often be saved. Lodging data for a period of years should receive more consideration than annual lodging data since they will give a more accurate picture of varietal performance.

1981 TEST CONDITIONS

Favorable weather prevailed during the fall of 1980 and seeding of the 1981 crop was completed by a near normal date. The winter was unusually mild, and consequently little winterkill was observed. Early warming in the spring hastened the maturity of the small grain crops, and heading dates considerably earlier than usual were recorded. Little spring freeze damage occurred, however. Above average precipitation in June, followed by periods of strong winds, resulted in severe lodging in certain areas of the state. The harvest dates of the 1981 crop were earlier than usual, and the harvest was completed without undue delay.

Heavy infestation of the head scab fungus and *Septoria* glume blotch were responsible for lower test weights and overall reduction in seed quality. Powdery mildew was in evidence, as were tan spot and loose smut. Little yield loss was attributed to these diseases.

1980 TEST CONDITIONS

The 1980 crop was seeded at near normal times and conditions in the fall of 1979. The winter season was also near normal with very little winter killing. Unseasonably warm temperatures did occur for several days in January and February, but the small grain plants maintained their winter-hardened condition and survived subsequent cold weather. Heading dates were earlier than normal, but spring freeze damage did not occur. Cooler than normal temperatures in May and June helped to alleviate below normal precipitation. Harvest was accomplished without unusual weather related delays.

Head scab disease caused considerable damage to late heading wheat. Scab was most severe in wheat planted in no-till corn fields where the above-ground corn residue served as a scab source. Barley yellow dwarf, wheat leaf rust, wheat spindle streak mosaic virus, wheat mildew, and barley scald were observed but caused minimal yield losses. Again this year, the cereal leaf beetle continued to expand its territory but caused little yield loss.

1979 TEST CONDITIONS

In contrast to the 1977 fall seeding weather, the 1978 fall seeding weather was near ideal. The first half of October was wet, but the latter half of October and the first half of November were mostly warm and dry, allowing good development of the small grains. The second half of November was cooler and wetter than normal. December had mild temperatures with above normal precipitation causing floods. Only a trace of snow occurred in December. January was colder and wetter than normal, averaging almost 9 degrees below normal, making it the fifth coldest January on record. February was also colder and wetter than normal, with temperatures about 8 degrees below normal and one inch plus of precipitation above normal. December through February was the seventh coldest winter on record.

March was about 6 degrees above normal with three inches below normal precipitation. Cool wet conditions prevailed through April and May, causing the spring of 1979 to be the latest on record. Precipitation and temperature averaged above normal for the month of June. The greater than normal winter rainfall kept soils in a high moisture condition and resulted in more plant heaving damage than usual. This was true for all small grains, but was especially severe in barley. The plant heaving and colder than normal winter temperatures resulted in severe winter killing of barley and oats in some areas of the state. Winter killing of wheat was only slight (less than 5%) but the wet spring caused some localized water damage areas. Many wheat diseases occurred, but wheat spindle streak mosaic virus was the most severe infection recorded since 1974. Scab on wheat and barley was frequently observed in many fields.

The prevalence of the cereal leaf beetle continued to increase. Most plants in the spring oat test at Lexington had their flag leaves destroyed by beetle feeding.

SMALL GRAIN VARIETIES FOR 1982

Varieties eligible for certification include (1) varieties that may have potential for Kentucky and (2) older varieties that are still acceptable for production in Kentucky. The characteristics of the small grain varieties are summarized in Tables 3 and 10.

SOFT RED WINTER WHEAT VARIETIES

Kentucky's climate and soils are well suited for the production of high quality soft red winter wheat. No single variety has all the desirable characteristics, but each has certain advantages. Yielding ability, straw strength, height, earliness, grain quality, and disease resistance are important in choosing a variety. Varietal performance is presented in Tables 4-9. Arthur and Abe are the two most widely grown varieties, though the acreage planted to Hart increased.

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 11-14. Varieties now commonly grown are Barsoy and Volbar.

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. Winter oats are also excellent for grazing and silage. Performance of the winter oat varieties is presented in Tables 15-17. Varieties now commonly grown are Compact, Norline and Walken. The variety Kenoat, formerly tested as KY 67-695, was released by the University of Kentucky in 1981.

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 winter oat varieties when yields of winter oats are not severely reduced from winter killing or disease. Two spring oat varieties (Otee and Jaycee) are commonly grown because of their higher level of resistance to Barley Yellow Dwarf Virus (oat red leaf). Performance data are listed in Table 18.

CERTIFIED SEED

Planting certified seed is one of the first steps in ensuring a good small grain crop. The extra cost of certified seed is justified in view of the high quality of seed obtained. Certified seed is seed which has been grown in such a way as to ensure the genetic identity and purity of a variety. Certified seed also helps to maintain freedom from weed and other crop seed and, in some cases, freedom from disease. The Kentucky Agricultural Experiment Station recommends that Kentucky-certified seed be used whenever possible for growing commercial crops of small grains.

Table 3.—Characteristics of Wheat Varieties Tested in 1981.

Variety	Protected*	Source	Release Date	Average of 1981 Tests Over 6 Locations Bu/A	Lbs/Bu	Days later heading than Doublecrop
Abe	Yes	Indiana	1972	52	57.1	7
Arthur	No	Indiana	1968	52	57.8	6
Arthur 71	Yes	Indiana	1971	50	57.3	7
Beau	No	Indiana	1976	49	58.8	9
Coker 747	Yes	Coker's Pedigreed Seeds	1977	59	56.6	8
Coker 762	Yes	Coker's Pedigreed Seeds	1979	53	51.5	9
Dancer	Yes	N. Am. Plant Breeders	1977	46	57.3	8
Delta Queen	Yes	N. Am. Plant Breeders	1978	46	54.4	8
Doublecrop	No	Arkansas	1975	55	58.7	0
Downy	Yes	Indiana	1976	43	57.7	8
Hart	No	Missouri	1976	62	57.0	6
Caldwell	Yes	Indiana	1980	61	56.9	6
Auburn	Yes	Indiana	1980	44	55.4	14
McNair 1003	Yes	Northrup King Seeds	1977	59	54.0	7
Oasis	Yes	Indiana	1973	51	57.7	8
Pike	Yes	Missouri	1980	55	56.4	7
Roland	No	Illinois	1977	49	54.3	8
Rosen	No	Arkansas	1979	54	54.2	5
Roy	Yes	N. Carolina	1979	60	53.7	7
Ruler	Yes	Ohio	1975	36	53.2	16
S76	Yes	Pioneer Hi Bred Int'l	1976	54	56.6	9
S78	Yes	Pioneer Hi Bred Int'l	1978	51	54.5	11
Southern Belle	Yes	N. Am. Plant Breeders	1980	62	59.2	2
Sullivan	Yes	Indiana	1977	51	58.6	5
Titan	Yes	Ohio	1978	45	52.0	16
Tyler	No	Virginia	1980	64	56.1	8
Voris 8015	Yes	Voris Seeds		60	54.7	5
Voris 8088	Yes	Voris Seeds	1981	52	52.6	6
Voris 7070	Yes	Voris Seeds	1982	56	54.7	3
Wheeler	No	Virginia	1980	62	58.1	7

* "Unauthorized propagation prohibited." Seed of these varieties must be sold by variety name only as a class of certified seed. This includes varieties for which protection has been applied and those for which protection has been granted.

Table 3.—Continued.

Variety	Average of 1981 Tests Over 6 Locations Height/in.	% Lodged	% Survival
Abe	40	29	100
Arthur	41	34	100
Arthur 71	41	41	100
Beau	40	06	100
Coker 747	37	36	100
Coker 762	35	43	100
Dancer	43	40	100
Delta Queen	39	49	100
Doublecrop	40	18	100
Downy	41	33	100
Hart	42	13	100
Caldwell	38	30	100
Auburn	41	04	100
McNair 1003	40	10	100
Oasis	42	30	100
Pike	39	07	100
Roland	39	09	100
Rosen	38	11	100
Roy	41	06	100
Ruler	44	04	100
S76	39	08	100
S78	37	06	100
Southern Belle	34	05	100
Sullivan	41	05	100
Titan	45	07	100
Tyler	42	12	100
Voris 8015	41	24	100
Voris 8088	41	24	100
Voris 7070	42	08	100
Wheeler	42	22	100

Table 4.—Wheat Performance Trials for Purchase Region, 1979-81.

Variety	Yield bu/				Test Weight lb/bu				Lodging %			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Abe	52	47	36	45	58.0	61.0	57.3	58.8	45	0	0	15
Arthur	52	51	25	43	58.4	61.9	59.9	60.1	50	0	0	17
Arthur 71	51	50	22	41	57.9	61.7	59.6	59.7	71	0	0	24
Beau	47	—	—	—	59.3	—	—	—	0	—	—	—
Coker 747	58	—	—	—	56.4	—	—	—	79	—	—	—
Coker 762	45	26	36	36	50.8	58.3	55.0	54.7	75	0	0	25
Dancer	40	49	—	44	57.3	61.4	—	59.4	81	0	—	40.5
Delta Queen	33	—	—	—	53.0	—	—	—	91	—	—	—
Doublecrop	58	61	26	48	59.2	62.0	61.4	60.9	14	0	0	5
Downy	41	—	—	—	55.9	—	—	—	39	—	—	—
Hart	60	46	—	53	57.4	60.4	—	58.9	4	0	—	2
Caldwell	59	—	—	—	57.6	—	—	—	24	—	—	—
Auburn	38	—	—	—	55.2	—	—	—	—	—	—	—
McNair 1003	60	65	20	48	54.6	58.5	54.3	56.4	16	0	0	5
Oasis	50	52	30	44	57.6	62.1	60.6	60.1	28	0	0	9
Pike	56	—	—	—	56.8	—	—	—	0	—	—	—
Roland	46	—	—	—	54.2	—	—	—	0	—	—	—
Rosen	51	63	21	45	53.8	58.2	56.6	56.2	4	0	0	1
Roy	62	—	—	—	54.9	—	—	—	4	—	—	—
Ruler	33	—	—	—	54.2	—	—	—	1	—	—	—
S76	54	45	16	38	57.1	60.3	57.3	58.2	4	0	0	1
S78	52	54	23	—	54.1	59.5	56.8	56.8	0	0	0	0
Southern Belle	58	—	—	—	59.7	—	—	—	0	—	—	—
Sullivan	53	—	—	—	59.4	—	—	—	14	—	—	—
Titan	48	—	—	—	51.6	—	—	—	20	—	—	—
Tyler	63	—	—	—	57.5	—	—	—	13	—	—	—
Voris 8015	59	—	—	—	55.3	—	—	—	23	—	—	—
Voris 8088	54	76	—	65	53.7	59.5	—	56.6	16	0	—	8
Voris 7070	62	—	—	—	55.5	—	—	—	4	—	—	—
Wheeler	64	—	—	—	58.7	—	—	—	19	—	—	—

Table 4.—Continued.

Variety	Plant Height in				Survival %				Date Headed April 1 = 1			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Abe	35	38	34	36	100	100	89	96	26	38	36	33
Arthur	38	41	35	38	100	100	84	95	27	37	37	34
Arthur 71	37	40	31	36	100	100	83	94	27	38	40	35
Beau	37	—	—	—	100	—	—	—	28	—	—	—
Coker 747	34	—	—	—	100	—	—	—	29	—	—	—
Coker 762	32	38	27	32	100	100	86	95	29	37	41	36
Dancer	39	45	—	42	100	100	—	100	28	39	—	33
Delta Queen	37	—	—	—	100	—	—	—	28	—	—	—
Doublecrop	37	43	36	39	100	100	86	95	19	32	31	27
Downy	37	—	—	—	100	—	—	—	29	—	—	—
Hart	38	39	—	38	100	100	—	100	26	39	—	32
Caldwell	36	—	—	—	100	—	—	—	27	—	—	—
Auburn	40	—	—	—	100	—	—	—	36	—	—	—
McNair 1003	37	40	30	36	100	100	83	94	27	38	39	35
Oasis	39	41	34	38	100	100	81	94	28	39	40	36
Pike	36	—	—	—	100	—	—	—	27	—	—	—
Roland	35	—	—	—	100	—	—	—	29	—	—	—
Rosen	36	38	30	35	100	100	76	92	27	35	38	33
Roy	37	—	—	—	100	—	—	—	27	—	—	—
Ruler	42	—	—	—	100	—	—	—	38	—	—	—
S76	35	37	30	34	100	100	81	94	28	42	44	38
S78	34	36	29	33	100	100	76	92	31	43	42	39
Southern Belle	31	—	—	—	100	—	—	—	22	—	—	—
Sullivan	37	—	—	—	100	—	—	—	25	—	—	—
Titan	44	—	—	—	100	—	—	—	39	—	—	—
Tyler	37	—	—	—	100	—	—	—	28	—	—	—
Voris 8015	38	—	—	—	100	—	—	—	27	—	—	—
Voris 8088	37	41	—	39	100	100	—	100	27	35	—	31
Voris 7070	38	—	—	—	100	—	—	—	23	—	—	—
Wheeler	39	—	—	—	100	—	—	—	27	—	—	—

Table 5.—Wheat Performance Trials for Western Coal Field Region, 1979-81.

Variety	Yield bu/A				Test Weight lb/bu				Lodging %			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Abe	59	50	53	54	57.9	58.3	59.6	58.6	0	59	0	20
Arthur	56	63	42	54	58.9	58.7	60.2	59.3	0	24	0	8
Arthur 71	56	61	44	54	58.6	59.2	60.3	59.4	0	33	24	19
Beau	47	70	37	51	59.0	49.2	54.8	54.3	0	0	23	8
Coker 747	69	68	54	64	58.6	54.1	58.6	57.1	0	0	48	16
Coker 762	62	45	46	51	53.2	49.2	54.8	52.4	0	79	5	28
Dancer	57	55	—	56	59.0	58.7	----	58.8	0	65	—	22
Delta Queen	52	—	—	—	55.7	----	----	----	0	—	—	—
Doublecrop	60	59	40	53	59.1	59.1	59.9	59.4	0	61	3	21
Downy	52	62	—	57	57.4	57.9	----	57.6	0	68	—	34
Hart	62	67	—	64	56.4	58.7	—	57.6	0	24	—	12
Caldwell	67	—	—	—	57.4	----	----	----	0	—	—	—
Auburn	45	—	—	—	57.0	----	----	----	0	—	—	—
McNair 1003	57	76	48	60	54.4	55.2	55.3	55.0	0	5	8	4
Oasis	63	53	45	54	58.8	58.9	59.9	59.2	0	41	34	25
Pike	59	—	—	—	57.0	----	----	----	0	—	—	—
Roland	55	66	58	59	55.2	55.4	58.4	56.3	0	0	0	0
Rosen	64	53	58	58	55.6	54.6	56.8	55.7	0	0	0	0
Roy	62	67	—	64	54.5	51.8	----	53.2	0	13	—	6
Ruler	38	48	40	42	53.8	53.5	55.0	54.1	0	3	23	9
S76	54	66	56	59	57.6	57.8	59.8	58.4	0	6	0	2
S78	60	67	70	66	56.3	56.8	58.5	57.2	0	0	0	0
Southern Belle	69	—	—	—	58.9	----	----	----	0	—	—	—
Sullivan	56	57	47	53	58.6	59.5	59.9	59.3	0	58	18	25
Titan	46	63	—	54	52.9	54.6	----	53.8	0	5	—	2
Tyler	61	—	—	—	55.9	----	----	----	0	—	—	—
Voris 8015	57	—	—	—	55.1	----	----	---	0	—	—	—
Voris 8088	65	65	—	65	54.4	53.0	----	53.7	0	21	—	10
Voris 7070	59	—	—	—	54.5	----	----	----	0	—	—	—
Wheeler	74	—	—	—	59.2	----	----	----	0	—	—	—

Table 5.—Continued.

Variety	Plant Height in				Survival %				Date Headed April 1 = 1			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Abe	39	44	36	40	100	100	86	95	29	39	40	36
Arthur	41	47	38	42	100	100	84	95	28	39	40	36
Arthur 71	41	47	39	30	100	100	85	95	28	40	41	36
Beau	38	45	37	40	100	100	86	95	31	40	43	38
Coker 747	38	47	35	40	100	100	93	98	29	43	40	37
Coker 762	36	38	31	35	100	100	83	94	32	41	48	40
Dancer	44	47	—	45	100	100	—	100	29	39	—	34
Delta Queen	40	—	—	—	100	----	—	—	31	—	—	—
Doublecrop	40	45	39	41	100	100	85	95	24	33	35	31
Downy	42	46	—	44	100	100	—	100	30	41	—	35
Hart	42	45	—	43	100	100	—	100	30	40	—	35
Caldwell	38	—	—	—	100	----	—	—	28	—	—	—
Auburn	41	—	—	—	100	—	—	—	39	—	—	—
McNair 1003	39	44	35	39	100	100	76	92	29	39	43	37
Oasis	41	45	41	42	100	100	89	96	30	40	40	37
Pike	39	—	—	—	100	----	—	—	29	—	—	—
Roland	38	43	34	38	100	100	89	96	30	42	42	38
Rosen	38	42	36	39	100	100	84	95	29	38	41	36
Roy	41	45	—	43	100	100	—	100	30	40	—	35
Ruler	44	47	41	44	100	100	91	97	40	44	48	44
S76	39	42	36	39	100	100	88	96	31	42	45	39
S78	39	40	35	38	100	100	93	98	33	43	46	41
Southern Belle	34	—	—	—	100	—	—	—	26	—	—	—
Sullivan	41	46	40	42	100	100	86	95	28	39	40	36
Titan	45	46	—	45	100	100	—	100	40	45	—	42
Tyler	43	—	—	—	100	----	—	—	32	—	—	—
Voris 8015	41	—	—	—	100	----	—	—	29	—	—	—
Voris 8088	42	44	—	43	100	100	—	100	29	38	—	33
Voris 7070	41	—	—	—	100	----	—	—	29	—	—	—
Wheeler	43	—	—	—	100	----	—	—	29	—	—	—

Table 6.—Wheat Performance Trials for Ohio Valley Region, 1979-81.

Variety	Yield bu/A				Test Weight lb/bu				Lodging %			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Abe	45	58	72	58	56.6	61.2	59.9	59.2	70	0	79	50
Arthur	49	66	73	63	56.4	61.7	61.0	59.7	83	0	45	43
Arthur 71	40	62	67	56	56.0	62.0	60.3	59.4	91	0	49	47
Beau	50	--	--	--	59.8	----	----	----	25	--	--	--
Coker 747	60	--	--	--	57.6	----	----	----	51	--	--	--
Coker 762	54	68	62	61	53.1	56.0	52.2	53.8	88	0	46	45
Dancer	44	60	--	35	57.4	62.2	----	59.8	73	0	--	36
Delta Queen	47	--	--	--	55.6	----	----	----	99	--	--	--
Doublecrop	48	58	64	57	56.0	62.9	59.8	59.5	53	0	33	29
Downy	46	--	--	--	56.8	----	----	----	70	--	--	--
Hart	65	68	--	44	57.0	60.7	----	58.8	48	0	--	24
Caldwell	62	--	--	--	56.6	----	----	----	63	--	--	--
Auburn	51	--	--	--	57.6	----	----	----	04	--	--	--
McNair 1003	61	71	74	69	56.1	57.6	58.0	57.2	23	0	33	19
Oasis	50	67	68	62	58.1	61.8	60.4	60.1	68	0	49	39
Pike	50	--	--	--	56.4	----	----	----	13	--	--	--
Roland	54	--	--	--	55.6	----	----	----	34	--	--	--
Rosen	56	65	76	66	55.7	58.0	57.0	56.9	38	0	44	27
Roy	60	--	--	--	55.7	----	----	----	24	--	--	--
Ruler	44	--	--	--	57.5	----	----	----	6	--	--	--
S76	61	69	81	70	57.5	60.5	59.8	59.3	18	0	10	9
S78	58	68	77	68	56.5	59.7	58.6	58.3	16	0	28	15
Southern Belle	60	--	--	--	60.2	----	----	----	13	--	--	--
Sullivan	43	--	--	--	57.6	----	----	----	69	--	--	--
Titan	59	--	--	--	55.2	----	----	----	11	--	--	--
Tyler	69	--	--	--	57.6	----	----	----	29	--	--	--
Voris 8015	66	--	--	--	55.6	----	----	----	66	--	--	--
Voris 8088	49	77	--	63	53.2	58.5	----	55.9	69	0	--	34
Voris 7070	54	--	--	--	55.4	----	----	----	29	--	--	--
Wheeler	58	--	--	--	57.7	----	----	----	61	--	--	--

Table 6.—Continued.

Variety	Plant Height in				Survival %				Date Headed April 1 = 1			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Abe	38	36	40	38	100	100	100	100	30	41	40	37
Arthur	38	42	41	40	100	100	100	100	27	41	40	36
Arthur 71	39	40	40	40	100	100	100	100	29	41	42	37
Beau	39	--	--	--	100	---	---	---	31	--	--	--
Coker 747	36	--	--	--	100	---	---	---	30	--	--	--
Coker 762	33	36	34	34	100	100	100	100	31	44	44	40
Dancer	39	45	--	42	100	100	---	100	30	41	--	35
Delta Queen	37	--	--	--	100	---	---	---	31	--	--	--
Doublecrop	37	41	39	39	100	100	100	100	22	34	33	30
Downy	38	--	--	--	100	---	---	---	28	--	--	--
Hart	39	41	--	40	100	100	---	100	26	41	--	33
Caldwell	36	--	--	--	100	---	---	---	28	--	--	--
Auburn	41	--	--	--	100	---	---	---	35	--	--	--
McNair 1003	39	40	39	39	100	100	100	100	28	43	42	38
Oasis	41	41	42	41	100	100	100	100	29	41	41	37
Pike	40	--	--	--	100	---	---	---	31	--	--	--
Roland	39	--	--	--	100	---	---	---	31	--	--	--
Rosen	37	36	37	37	100	100	100	100	26	40	39	35
Roy	39	--	--	--	100	---	---	---	28	--	--	--
Ruler	44	--	--	--	100	---	---	---	37	--	--	--
S76	38	39	39	39	100	100	100	100	31	42	42	38
S78	37	36	38	37	100	100	100	100	32	43	44	40
Southern Belle	33	--	--	--	100	---	---	---	23	--	--	23
Sullivan	38	--	--	--	100	---	---	---	25	--	--	25
Titan	45	--	--	--	100	---	---	---	36	--	--	36
Tyler	41	--	--	--	100	---	---	---	30	--	--	30
Voris 8015	39	--	--	--	100	---	---	---	25	--	--	25
Voris 8088	39	41	--	40	100	100	---	100	28	41	--	34
Voris 7070	40	--	--	--	100	---	---	---	24	--	--	--
Wheeler	39	--	--	--	100	---	---	---	28	--	--	--

Table 7.—Wheat Performance Trials for Bluegrass Region, 1979-81.

Variety	Yield bu/A				Test Weight lb/bu				Lodging %			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Abe	68	62	38	56	60.9	58.7	55.1	58.2	0	0	48	16
Arthur	68	62	37	56	60.8	59.7	56.2	58.9	0	0	62	21
Arthur 71	67	61	26	51	61.6	59.6	52.7	58.0	0	0	71	24
Beau	64	62	38	55	61.6	59.3	55.6	58.8	0	0	19	6
Coker 747	71	75	29	58	59.1	56.4	49.8	55.1	0	0	60	20
Coker 762	70	82	50	67	54.1	54.3	49.5	52.6	0	0	43	14
Dancer	56	59	--	57	60.8	60.2	--	60.5	0	0	--	0
Delta Queen	60	--	--	--	57.8	----	----	----	0	--	--	--
Doublecrop	60	55	39	51	61.8	60.8	60.7	61.1	0	0	18	6
Downy	50	62	--	56	58.7	58.5	----	58.6	0	0	--	0
Hart	72	67	--	69	59.4	60.1	----	59.7	0	0	--	0
Caldwell	68	--	--	--	59.5	----	----	----	0	--	--	--
Auburn	52	--	--	--	56.2	----	----	----	0	--	--	--
McNair 1003	76	82	55	71	57.2	57.0	49.4	54.5	0	0	66	22
Oasis	64	64	35	54	61.0	59.2	54.2	58.1	0	0	71	24
Pike	67	--	--	--	58.7	----	----	----	0	--	--	--
Roland	60	61	33	51	56.8	58.0	44.6	53.1	0	0	16	5
Rosen	56	61	33	50	55.6	57.4	47.8	53.6	0	0	40	13
Roy	77	62	--	69	54.9	56.9	----	55.9	0	0	--	0
Ruler	58	62	32	51	57.5	56.9	44.8	53.0	0	0	9	3
S76	61	70	37	56	57.9	59.1	52.0	56.3	0	0	6	2
S78	56	64	41	54	58.1	56.9	50.4	55.1	0	0	35	12
Southern Belle	76	--	--	--	61.9	----	----	----	0	--	--	--
Sullivan	65	60	36	54	62.0	60.1	54.9	59.0	0	0	52	17
Titan	61	72	--	66	55.0	54.9	----	54.9	0	0	--	0
Tyler	78	--	--	--	58.9	----	----	----	0	--	--	--
Voris 8015	73	--	--	--	56.7	----	----	----	0	--	--	--
Voris 8088	61	65	--	63	53.3	55.2	----	54.2	0	0	--	0
Voris 7070	59	--	--	--	55.6	----	----	----	0	--	--	--
Wheeler	69	--	--	--	61.0	----	----	----	0	--	--	--

Table 7.—Continued.

Variety	Plant Height in				Survival %				Date Headed April 1 = 1			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Abe	44	40	41	42	100	100	100	100	34	47	43	41
Arthur	48	44	45	46	100	98	100	99	34	46	43	41
Arthur 71	46	42	44	44	100	99	99	99	34	47	44	42
Beau	44	39	42	42	100	96	100	99	36	48	45	43
Coker 747	42	43	38	41	100	99	100	100	36	51	44	43
Coker 762	39	35	34	36	100	94	95	96	36	50	45	44
Dancer	51	43	--	47	100	93	--	97	36	47	--	41
Delta Queen	44	--	--	--	100	--	--	--	37	--	--	--
Doublecrop	44	42	34	40	100	98	100	99	38	42	40	37
Downy	45	43	--	44	100	98	--	99	36	48	--	42
Hart	46	42	--	44	100	99	--	99	35	46	--	40
Caldwell	41	--	--	--	100	--	--	--	34	--	--	--
Auburn	42	--	--	--	100	--	--	--	40	--	--	--
McNair 1003	45	41	42	43	100	95	99	98	36	47	42	42
Oasis	48	43	44	45	100	97	100	99	36	47	44	42
Pike	43	--	--	--	100	--	--	--	32	--	--	--
Roland	43	38	39	40	100	99	39	79	35	49	45	43
Rosen	42	37	38	39	100	99	100	100	32	47	42	40
Roy	45	40	--	42	100	96	--	98	36	47	--	41
Ruler	46	41	42	43	100	98	100	99	44	50	52	49
S76	44	38	39	40	100	96	100	99	40	48	45	44
S76	39	36	35	37	100	99	99	99	40	50	46	45
Southern Belle	38	--	--	--	100	--	--	--	30	--	--	--
Sullivan	47	42	44	44	100	98	44	81	34	47	44	42
Titan	48	42	--	45	100	98	--	99	44	51	--	47
Tyler	46	--	--	--	100	--	--	--	37	--	--	--
Voris 8015	44	--	--	--	100	--	--	--	34	--	--	--
Voris 8088	45	42	--	43	100	98	--	99	33	47	--	40
Voris 7070	46	--	--	--	100	--	--	--	32	--	--	--
Wheeler	48	--	--	--	100	--	--	--	34	--	--	--

Table 8.—Wheat Performance Trials for Southern Tier Region, 1979-81.[1]

Variety	Yield bu/A 1981 H	1981 P	1980 H	1979 E	Mean	Test Weight lb/bu 1981 H	1981 P	1980 H	1979 E	Mean	Lodging % 1981 H	1981 P	1980 H	1979 E	Mean
Abe	46	42	57	46	48	56.2	52.9	61.6	60.7	57.8	0	59	10	0	17
Arthur	45	42	59	49	49	57.8	54.2	61.9	60.9	58.7	0	68	20	0	22
Arthur 71	43	40	52	43	44	56.8	58.6	61.7	60.7	59.4	0	83	33	0	29
Beau	39	48	--	--	44	56.0	49.0	----	----	52.5	0	8	--	--	4
Coker 747	53	41	--	--	47	57.6	58.6	----	----	58.1	0	89	--	--	44
Coker 762	53	36	55	43	47	53.2	53.2	55.7	54.0	54.0	0	96	41	0	34
Dancer	34	42	56	--	44	55.4	59.0	61.4	----	58.6	0	84	48	--	44
Delta Queen	49	32	--	--	40	55.5	55.7	----	----	55.6	8	95	--	--	52
Doublecrop	49	57	--	--	53	59.4	59.1	62.0	61.7	60.6	8	30	18	0	14
Downy	38	32	--	--	35	54.1	57.4	----	----	55.8	5	84	--	--	44
Hart	55	59	68	--	61	57.6	56.4	61.1	----	58.4	0	28	5	--	11
Caldwell	53	56	--	--	54	56.2	57.4	----	----	56.8	0	93	--	--	46
Auburn	33	43	--	--	38	55.8	57.0	----	----	56.4	0	18	--	--	9
McNair 1003	55	46	75	46	56	53.7	54.4	58.3	55.6	55.5	0	24	0	0	6
Oasis	41	36	56	49	46	58.1	58.8	62.1	60.7	59.9	3	81	25	0	27
Pike	46	50	--	--	48	56.3	57.0	----	----	56.6	0	31	--	--	16
Roland	37	44	--	--	40	51.6	55.2	----	----	53.4	0	18	--	--	9
Rosen	50	50	65	51	54	53.6	55.6	57.5	57.9	56.2	0	25	1	0	6
Roy	55	41	--	--	48	54.0	48.2	----	----	51.1	0	8	--	--	4
Ruler	27	18	--	--	22	49.9	46.2	----	----	48.0	0	14	--	--	7
S76	53	44	76	46	55	57.1	52.1	60.3	59.8	57.3	0	26	3	0	7
S78	40	40	61	48	47	53.2	49.0	59.5	59.8	55.4	0	20	8	0	7
Southern Belle	55	57	--	--	56	58.1	56.4	----	----	57.2	0	15	--	--	8
Sullivan	45	43	--	--	44	58.1	56.0	----	----	57.0	0	46	--	--	23
Titan	31	26	--	--	28	52.7	44.6	----	----	48.6	0	10	--	--	5
Tyler	59	55	--	--	57	55.2	51.7	----	----	53.4	0	29	--	--	14
Voris 8015	55	51	--	--	53	55.5	50.1	----	----	52.8	0	53	--	--	26
Voris 8088	45	38	63	--	49	52.5	48.4	58.0	----	53.0	0	59	27	0	22
Voris 7070	51	53	--	--	52	54.6	52.4	----	----	53.5	0	15	--	--	8
Wheeler	58	50	--	--	54	58.6	53.6	----	----	56.1	8	41	--	--	24

Table 8.—Continued.

Variety	Plant Height in 1981 H	1981 P	1980 H	1979 E	Mean	Survival % 1981 H	1981 P	1980 H	1979 E	Mean	Date Headed April 1 = 1 1981 H	1981 P	1980 H	1979 E	Mean
Abe	40	41	44	37	40	100	100	100	94	98	27	31	41	36	34
Arthur	42	40	47	39	42	100	100	100	93	98	27	30	41	36	34
Arthur 71	41	41	45	38	41	100	100	100	88	97	28	31	--	--	30
Beau	39	43	--	--	41	100	100	---	--	100	30	33	--	--	31
Coker 747	35	37	--	--	36	100	100	---	--	100	29	31	--	--	30
Coker 762	34	37	39	32	36	100	100	100	85	96	29	32	41	38	35
Dancer	45	41	48	--	45	100	100	100	--	100	29	32	42	--	34
Delta Queen	39	39	--	--	39	100	100	---	--	100	28	32	--	--	30
Doublecrop	41	41	45	39	42	100	100	100	91	98	21	23	36	32	28
Downy	42	41	--	--	42	100	100	---	--	100	29	32	--	--	30
Hart	43	41	47	--	44	100	100	100	--	100	27	29	41	--	32
Caldwell	39	41	--	--	40	100	100	---	--	100	27	31	--	--	29
Auburn	39	43	--	--	41	100	100	---	--	100	33	39	--	--	36
McNair 1003	41	41	43	38	42	100	100	100	86	96	27	31	41	38	34
Oasis	42	41	46	39	42	100	100	100	89	97	29	32	41	39	35
Pike	38	40	--	--	39	100	100	---	--	100	28	31	--	--	30
Roland	38	41	--	--	40	100	100	---	--	100	30	32	--	--	31
Rosen	39	39	44	35	39	100	100	100	89	97	26	29	40	37	33
Roy	41	41	--	--	41	100	100	---	--	100	29	30	--	--	30
Ruler	43	44	--	--	44	100	100	---	--	100	35	40	--	--	38
S76	40	40	44	35	40	100	100	100	91	98	29	32	41	40	36
S78	35	38	42	34	37	100	100	100	93	98	32	33	44	42	38
Southern Belle	33	33	--	--	33	100	100	---	--	100	22	27	--	--	24
Sullivan	41	40	--	--	40	100	100	---	--	100	26	28	--	--	27
Titan	45	45	--	--	45	100	100	---	--	100	35	40	--	--	38
Tyler	44	43	--	--	44	100	100	---	--	100	29	32	--	--	30
Voris 8015	43	43	--	--	43	100	100	---	--	100	26	29	--	--	28
Voris 8088	41	43	45	--	43	100	100	100	--	100	27	31	40	--	33
Voris 7070	44	41	--	--	42	100	100	---	--	100	25	26	--	--	26
Wheeler	43	43	--	--	43	100	100	---	--	100	29	32	--	--	30

1/ Wheat trials were grown at Elkton (E) in 1979, Hopkinsville (H) in 1980 and Princeton Limestone (P) and Hopkinsville in 1981.

Table 9.—Wheat Performance Trials for North Central Region, 1979-81.[1]

Variety	Yield bu/A			Test Weight lb/bu			Lodging %		
	1980	1979	Mean	1980	1979	Mean	1980	1979	Mean
Abe	40	41	40	58.6	60.1	59.4	0	0	0
Arthur	49	40	44	58.5	60.6	59.6	0	0	0
Arthur 71	35	36	36	58.6	60.6	59.6	0	0	0
Coker 762	39	44	42	53.8	56.8	55.3	0	0	0
Dancer	44	--	--	59.3	----	----	0	--	--
Doublecrop	34	38	36	57.9	60.7	59.3	0	0	0
Hart	48	--	--	56.4	----	----	0	--	--
McNair 1003	50	36	43	55.4	58.8	57.1	0	0	0
Oasis	42	44	43	59.2	60.7	60.0	0	0	0
Rosen	49	47	48	56.9	58.6	57.8	0	0	0
S76	55	39	47	56.8	59.7	58.2	0	0	0
S78	49	41	45	56.6	58.8	57.7	0	0	0
Voris 8018	45	--	--	56.5	----	----	0	--	--

Variety	Plant Height in			Survival %			Date Headed May		
	1980	1979	Mean	1980	1979	Mean	1980	1979	Mean
Abe	32	34	33	100	98	99	15	11	13
Arthur	35	34	35	100	88	94	14	12	13
Arthur 71	33	35	34	100	97	98	15	11	13
Coker 762	29	30	30	100	95	98	19	15	17
Dancer	35	--	--	100	--	--	15	--	--
Doublecrop	32	36	34	100	92	96	10	6	8
Hart	34	--	--	100	--	--	16	--	--
McNair 1003	34	36	35	100	98	99	17	12	15
Oasis	35	37	36	100	99	100	14	12	13
Rosen	32	34	33	100	98	99	15	11	13
S76	33	32	33	100	98	99	17	12	15
S78	31	31	31	100	97	98	18	12	15
Voris 8018	34	--	--	100	--	--	15	--	--

1/ The locations where the trial was grown were 1979, Elizabethtown; 1980, Elizabethtown; 1981, Elizabechtown. The 1981 test was discarded due to chemical damage.

Table 10.—Characteristics of Barley and Oat Varieties Tested in 1981.

Variety	Protected[A]	Origin	Release Date	Avg All 1981 Tests Bu/A	Lbs/Bu	Days later heading than Barsoy
			Winter Barley			
Barsoy	No	Kentucky	1966	74	43.8	00
Halton	No	Canada		75	43.2	10
Perry	No	Missouri	1977	76	45.3	06
Pike	Yes	Indiana	1975	67	43.1	04
Surry	No	Virginia	1976	72	41.4	06
Volbar	No	Tennessee	1974	85	43.3	10
			Winter Oats			
Brooks	No	N. Carolina	1979	84	30.9	23
Coker 716	Yes	Coker Seed Co	1971	94	32.6	22
Compact	No	Kentucky	1969	70	32.6	35
Kenoat	Experimental	Kentucky	--	81	34.5	32
Norline	No	Indiana	1960	78	33.1	39
Pennwin	No	Pennsylvania	1973	80	31.8	36
Southern States 76-30	Yes	Southern States Coop	1980	91	35.1	21
Walken	No	Kentucky	1970	77	32.9	43
			Spring Oats			
Andrew	No	Minnesota	1949	114	31.9	48
Bates	No	Missouri	1976	122	33.4	47
Clintford	No	Indiana	1966	112	33.7	48
Lang	Yes	Illinois	1976	141	33.2	44
Otee	No	Illinois	1973	113	30.8	48

(continued)

Table 10.—Continued.

Variety	Avg All 1981 Tests		
	Height Inches	% Lodged	% Survival
Winter Barley			
Barsoy	36	42	100
Halton	40	29	100
Perry	38	33	100
Pike	33	50	100
Surry	38	20	100
Volbar	42	17	100
Winter Oats			
Brooks	42	54	85
Coker 716	43	37	84
Compact	39	26	88
Kenoat	47	38	92
Norline	53	36	89
Pennwin	46	35	80
Southern States 76-30	46	39	86
Walken	46	13	91
Spring Oats			
Andrew	54	60	100
Bates	47	40	100
Clintford	47	68	100
Lang	45	50	100
Otee	49	55	100

* "Unauthorized propagation prohibited." Seed of these varieties must be sold by variety name only as a class of certified seed. This includes varieties for which protection has been applied and those for which protection has been granted.

Table 11.—Winter Barley Performance Trials for Western Coal Field Region, 1980-81.[1]

Variety	Yield Bu/A			% Survival			Test Weight Lbs/Bu		
	1981	1980	Mean	1981	1980	Mean	1981	1980	Mean
Barsoy	57	41	49	100	85	92	43.6	51.9	47.8
Halton	60	--	--	100	--	--	44.1	----	----
Perry	72	24	48	100	82	91	45.4	50.1	47.8
Pike	47	13	30	100	68	84	45.1	48.8	47.0
Surry	46	18	32	100	61	80	41.9	47.1	44.5
Volbar	69	49	59	98	69	84	43.3	44.0	43.6

Variety	Heading Date			Height - Inches			Lodging %		
	1981	1980	Mean	1981	1980	Mean	1981	1980	Mean
Barsoy	4/13	4/25	4/19	35	28	32	00	00	00
Halton	4/27	----	----	41	--	--	00	--	00
Perry	4/21	5/9	4/30	37	27	32	00	00	00
Pike	4/19	5/6	4/28	28	21	24	00	00	00
Surry	4/22	5/9	5/1	33	26	30	00	00	00
Volbar	4/27	5/7	5/2	41	36	38	00	00	00

Variety	Seed Weight gms/1000 seed		
	1981	1980	Mean
Barsoy	30.5	31.5	31.0
Halton	35.4	----	----
Perry	31.7	31.7	31.7
Pike	30.7	28.5	29.6
Surry	29.2	28.5	28.8
Volbar	35.4	36.7	36.0

[1] The location in 1980 and 1981 was Princeton Sandstone soil. No test was grown in 1979.

Table 12.—Winter Barley Performance Trials for Bluegrass Region, 1979-81.[1]

Variety	Yield Bu/A				% Survival				Test Weight Lbs/Bu			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Barsoy	106	42	21	56	100	100	28	76	48.6	52.7	49.2	50.2
Halton	111	--	--	--	100	----	--	--	49.1	----	----	----
Perry	97	36	41	58	100	100	45	82	51.7	53.2	47.8	50.9
Pike	97	42	27	43	100	100	45	82	48.2	50.6	47.7	48.8
Surry	100	40	52	64	100	100	60	87	44.7	48.7	44.9	46.1
Volbar	114	41	53	69	100	100	52	84	48.1	47.7	45.4	47.1

Variety	Date Headed				Height Inches				Grams/1000 Seed			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Barsoy	4/20	4/28	5/6	4/28	35	30	29	31	27.9	30.2	35.0	31.0
Halton	5/1	----	----	----	42	--	--	--	33.5	----	----	----
Perry	4/26	5/6	5/9	5/4	39	29	33	34	32.7	30.7	37.7	33.7
Pike	4/26	5/4	5/6	5/2	34	26	32	31	30.6	29.2	35.3	31.7
Surry	4/26	5/5	5/8	5/3	38	28	35	34	28.1	29.2	35.1	30.8
Volbar	4/28	5/12	5/10	5/7	44	31	36	37	31.1	35.6	41.8	36.2

Variety	% Lodging			
	1981	1980	1979	Mean
Barsoy	42	00	00	14
Halton	08	00	00	3
Perry	12	00	00	4
Pike	48	00	00	16
Surry	00	00	00	00
Volbar	32	00	00	11

1/ Location for all three years was Lexington.

Table 13.—Winter Barley Performance Trials for Southern Tier Region, 1979-81.[1]

	Yield Bu/A							% Survival							% Lodged						
	1981		1980		1979			1981		1980		1979			1981		1980		1979		
Variety	P	H	P	H	P	E	Mean	P	H	P	H	P	E	Mean	P	H	P	H	P	E	Mean
Barsoy	72	63	80	98	41	33	64	100	100	99	100	89	49	90	84	44	5	15	33	01	30
Halton	71	60	--	--	--	--	66	100	100	--	--	--	--	100	86	23	--	--	--	--	54
Perry	69	65	59	62	69	44	61	100	100	100	100	99	66	94	91	29	82	98	00	00	50
Pike	52	73	73	90	43	31	60	100	100	99	100	95	61	92	99	55	16	49	53	00	45
Surry	73	69	78	80	47	46	66	100	100	100	100	96	64	93	68	13	32	71	05	00	32
Volbar	89	71	98	93	71	56	80	100	100	99	100	94	51	91	15	22	99	75	01	00	35

	Test Weight Lbs/Bu							Date Headed						
	1981		1980		1979			1981		1980		1979		
Variety	P	H	P	H	P	E	Mean	P	H	P	H	P	H	Mean
Barsoy	39.6	43.2	49.9	51.2	47.8	48.0	46.6	4/14	4/9	4/23	4/21	4/26	4/26	4/20
Halton	39.2	40.5	----	----	----	----	39.8	4/22	4/18	----	----	----	----	4/20
Perry	41.0	43.2	47.9	46.2	50.1	49.0	46.2	4/20	4/15	5/1	5/1	5/4	5/6	4/28
Pike	36.3	42.8	45.8	47.1	46.6	47.1	44.3	4/16	4/11	4/26	4/26	4/29	5/1	4/23
Surry	37.6	41.3	44.6	44.2	44.1	44.2	42.7	4/18	4/14	4/28	4/30	5/4	5/6	4/27
Volbar	41.1	40.7	44.7	46.1	46.7	44.1	43.9	4/25	4/18	5/2	5/3	5/5	5/8	4/30

	Height Inches							Grams/1000 Seed						
	1981		1980		1979			1981		1980		1979		
Variety	P	H	P	H	P	E	Mean	P	H	P	H	P	E	Mean
Barsoy	35	37	43	41	32	33	37	24.5	28.4	27.3	29.9	29.1	30.8	28.3
Halton	35	40	--	--	--	--	38	30.3	30.6	----	----	----	----	30.4
Perry	35	40	43	45	37	34	39	28.6	32.0	28.6	28.5	33.6	32.5	30.6
Pike	35	36	38	38	32	30	35	22.4	27.8	29.4	26.2	28.4	29.3	27.2
Surry	38	41	42	45	37	36	40	25.4	29.8	27.9	27.1	29.9	29.5	28.3
Volbar	37	45	49	49	42	40	44	28.8	34.9	33.9	32.8	39.8	39.4	34.9

1/ Locations were Princeton Limestone soil (p) and Hopkinsville (H) in 1980 and 1981, and Princeton Limestone (P) and Elkton (E) in 1979.

Table 14.—Winter Barley Performance Trials for North Central Region, 1979-81.[1]

Variety	Yield Bu/A			% Survival			Test Weight Lbs/Bu		
	1980	1979	Ave.	1980	1979	Ave.	1980	1979	Ave.
Barsoy	58	40	49	100	82	91	49.6	48.2	48.9
Ky 1	52	59	56	100	98	99	45.9	48.0	47.0
Maury	63	51	57	100	85	92	45.1	45.5	45.3
Monroe	54	50	52	100	85	92	44.0	43.0	43.5
Perry	57	50	54	100	85	92	49.2	48.9	49.0
Pike	58	38	48	100	90	95	47.5	46.6	47.0
Surry	57	47	52	100	82	91	45.2	45.2	45.2
Volbar	76	79	78	100	88	94	45.4	44.3	44.8

Variety	Date Headed			Height ins.			% Lodged		
	1980	1979	Ave.	1980	1979	Ave.	1980	1979	Ave.
Barsoy	4/29	4/26	4/28	38	33	36	00	00	00
Ky 1	5/14	5/12	5/13	41	43	42	100	00	50
Maury	5/8	5/9	5/8	37	35	36	25	00	12
Monroe	5/9	5/11	5/10	35	36	36	00	00	00
Perry	5/6	5/6	5/6	36	35	36	00	00	00
Pike	5/1	5/1	5/1	32	31	32	00	00	00
Surry	5/3	5/6	5/4	37	35	36	00	00	00
Volbar	5/8	5/8	5/8	42	40	41	00	00	00

Variety	Grams/1000 Seed		
	1980	1979	Ave.
Barsoy	30.5	32.0	31.1
Ky 1	32.2	35.7	34.0
Maury	31.4	31.4	31.4
Monroe	31.4	32.1	31.8
Perry	32.7	32.8	32.8
Pike	30.5	31.2	30.8
Surry	30.6	31.1	30.8
Volbar	37.7	40.7	39.2

1/ The location was Elizabethtown in 1979, 1980 and 1981. The 1981 test was discarded due to chemical damage.

Table 15.—Winter Oat Performance Trials for Western Coal Field Region, 1980-81.[1]

	Yield Bu/A			Test Wt lbs/bu		
	1981	1980	Mean	1981	1980	Mean
Brooks	86	59	72	27.6	31.9	29.4
Coker 716	91	74	82	31.2	35.8	33.5
Compact	74	68	71	32.3	38.0	35.2
Kenoat	90	70	80	33.6	36.2	34.9
Norline	80	68	74	32.3	36.0	34.2
Pennwin	90	76	83	31.0	36.4	33.7
Southern States 76-30	94	69	82	33.8	35.6	34.7
Walken	74	72	73	30.9	36.9	33.9

	% Survival			Heading Date		
	1981	1980	Mean	1981	1980	Mean
Brooks	73	54	64	5/6	5/17	5/12
Coker 716	59	84	72	5/6	5/16	5/11
Compact	69	79	74	5/20	5/22	5/21
Kenoat	85	71	78	5/17	5/21	5/19
Norline	73	70	72	5/24	5/20	5/22
Pennwin	56	70	63	5/22	5/23	5/22
Southern States 76-30	70	75	72	5/6	5/15	5/10
Walken	75	74	74	5/28	5/26	5/27

(continued)

Table 15.—Continued.

	Height/inches			% Lodging		
	1981	1980	Mean	1981	1980	Mean
Brooks	44	36	40	43	100	72
Coker 716	45	32	38	08	100	54
Compact	41	32	36	00	100	50
Kenoat	51	42	46	20	100	60
Norline	56	41	48	11	100	56
Pennwin	50	38	44	04	100	52
Southern States 76-30	47	36	42	10	100	55
Walken	48	40	44	00	100	50

	Seed Weight/ gms/1000 seed		
	1981	1980	Mean
Brooks	31.8	29.9	30.8
Coker 716	32.5	26.6	29.6
Compact	30.6	25.6	28.1
Kenoat	36.8	27.5	32.2
Norline	30.3	30.7	30.5
Pennwin	30.3	29.2	29.8
Southern States 76-30	34.3	28.8	31.6
Walken	30.1	24.9	27.5

1/ Location was Princeton sandstone soil in 1980 and 1981. No test was grown in 1979

Table 16.—Winter Oat Performance Trials for Bluegrass Region, 1979-81.[1]

Variety	Yield bu/A				% Survival				Test Wt lbs/bu			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Brooks	82	67	--	74	92	100	--	96	36.2	36.6	----	36.4
Coker 716	110	85	18	71	98	100	30	76	36.2	35.2	35.8	35.7
Compact	66	65	43	58	100	100	72	91	37.4	35.5	37.4	36.8
Kenoat	77	66	50	64	98	100	88	95	37.4	37.8	37.7	37.6
Norline	93	62	47	67	100	100	78	93	36.6	35.9	37.6	36.7
Pennwin	90	74	54	73	95	100	78	91	36.6	36.6	36.8	36.7
Southern States 76-30	88	72	32	64	98	100	48	82	37.6	35.0	37.3	36.4
Walken	90	69	60	73	100	100	89	95	36.3	36.8	37.4	36.8

	Date Headed				Height Inches				Grams/1000 Seed			
	1981	1980	1979	Mean	1981	1980	1979	Mean	1981	1980	1979	Mean
Brooks	5/12	5/17	----	5/14	37	31	--	34	32.1	30.7	----	31.4
Coker 716	5/11	5/16	5/14	5/14	38	31	34	34	27.2	23.7	30.0	27.0
Compact	5/22	5/22	5/20	5/21	32	26	32	30	25.9	22.8	27.8	25.4
Kenoat	5/18	5/24	5/20	5/21	42	30	36	36	28.2	27.0	30.0	28.4
Norline	5/24	5/23	5/19	5/22	48	30	38	39	24.7	26.7	33.9	28.4
Pennwin	5/24	5/25	5/20	5/23	44	33	40	39	30.0	27.8	33.3	30.4
Southern States 76-30	5/8	5/14	5/12	5/11	41	34	38	38	28.3	24.6	31.6	28.2
Walken	5/27	5/26	5/25	5/26	40	29	36	35	25.3	28.2	27.5	27.0

Variety	% Lodging			
	1981	1980	1979	Mean
Brooks	22	00	--	11
Coker 716	02	00	00	1
Compact	00	00	00	00
Kenoat	05	00	00	2
Norline	12	00	00	4
Pennwin	02	00	00	1
Southern States 76-30	10	00	00	3
Walken	00	00	00	00

1/ Location for all three years was Lexington.

Table 17.—Winter Oat Performance Trials for Southern Tier Region, 1979-81.[1]

Variety	Yield Bu/A 1981 P	1980 P	1979 P	1979 E	Mean	% Survival 1981 P	1980 P	1979 P	1979 E	Mean
Brooks	83	110	--	--	96	91	82	--	--	86
Coker 716	82	130	92	41	86	96	92	91	18	74
Compact	69	86	89	74	80	94	89	95	74	82
Kenoat	77	102	84	72	84	94	92	91	50	82
Norline	62	90	109	66	82	93	90	95	51	82
Pennwin	60	80	100	64	76	88	94	92	32	76
Southern States 76-30	91	123	90	56	90	89	88	90	22	72
Walken	90	111	104	55	90	98	94	99	42	83

Variety	Test Weight Lbs/Bu 1981 P	1980 P	1979 P	1979 E	Mean	Date Headed May 1981 P	1980 P	1979 P	1979 E	Mean
Brooks	29.5	32.2	----	----	30.8	3	15	--	--	9
Coker 716	30.4	34.8	35.8	36.2	34.2	2	12	12	15	10
Compact	29.2	35.8	37.0	37.9	35.0	16	21	20	17	18
Kenoat	32.4	36.0	37.2	37.2	35.7	13	21	19	19	18
Norline	30.4	34.2	36.3	36.2	34.3	20	22	19	18	20
Pennwin	27.8	31.0	36.8	35.7	32.8	13	24	20	21	20
Southern States 76-30	34.6	36.6	36.2	35.8	35.8	1	12	11	14	10
Walken	31.6	35.0	36.0	35.4	34.5	27	26	25	23	25

1/ Winter oat trials were grown at Princeton Limestone soil (P) in 1979, 1980 and 1981, and at Elkton (E) in 1979.

Variety	Height Ins. 1981 P	1980 P	1979 P	1979 E	Mean	% Lodged 1981 P	1980 P	1979 P	1979 E	Mean
Brooks	45	43	--	--	44	98	--	--	--	99
Coker 716	47	43	37	37	41	100	100	00	00	50
Compact	43	42	34	30	37	78	100	00	00	44
Kenoat	48	46	42	39	44	89	100	00	00	47
Norline	54	46	45	41	46	84	100	00	00	46
Pennwin	45	46	43	42	44	99	100	00	00	50
Southern States 76-30	50	47	41	39	44	98	100	00	00	50
Walken	49	47	40	38	44	40	100	00	00	35

Variety	Grams/1000 Seed 1981 P	1980 P	1979 P	1979 E	Mean
Brooks	30.5	25.8	----	----	28.2
Coker 716	28.9	23.5	26.6	27.0	26.5
Compact	26.0	22.5	26.9	24.8	25.0
Kenoat	28.4	23.2	27.3	28.5	26.8
Norline	27.1	26.5	30.2	30.3	28.5
Pennwin	27.1	20.7	30.9	28.2	26.7
Southern States 76-30	34.8	24.7	29.4	28.5	29.4
Walken	30.1	22.4	26.0	22.7	25.3

Table 18.—Spring Oat Performance Trials for All Regions of Kentucky, 1979-81.[1]

	Yield Bu/A 1981	1980	1979	Mean	Test Weight Lbs/Bu 1981	1980	1979	Mean
Andrew	114	55	74	81	31.9	35.4	38.5	35.3
Bates	122	49	75	82	33.4	35.6	38.0	35.7
Clintford	112	49	62	74	33.7	37.2	39.4	36.8
Lang	141	53	77	90	33.2	33.3	35.7	34.1
Otee	113	48	65	75	30.8	36.6	38.0	35.1

	Date Headed 1981	1980	1979	Mean	Height Ins. 1981	1980	1979	Mean
Andrew	6/1	6/3	6/2	6/2	54	32	45	44
Bates	5/31	6/1	6/1	6/1	47	26	38	37
Clintford	6/1	6/3	6/1	6/2	47	27	35	36
Lang	5/28	6/1	6/1	5/31	45	24	35	35
Otee	6/1	6/3	6/1	6/2	49	27	36	37

	Grams/1000 Seed 1981	1980	1979	Mean	% Lodged 1981	1980	1979	Mean
Andrew	26.7	26.0	30.9	27.9	60	00	00	20
Bates	25.8	26.3	29.7	27.3	40	00	00	13
Clintford	27.0	29.1	32.4	29.5	68	00	00	23
Lang	30.0	27.7	33.9	30.5	50	00	00	17
Otee	23.6	24.3	26.4	24.8	55	00	00	18

1/ Location was Lexington in 1979, 1980 and 1981.