

*Measured Crop Performance*

**SMALL GRAIN**

**1974**

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1974

## PERFORMANCE OF SMALL GRAIN VARIETIES IN NORTH CAROLINA

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## INTRODUCTION

The Official Variety Test on Small Grain varieties in North Carolina is conducted annually by locating evaluation trials throughout the small grain producing area of the state. These tests are conducted to determine the value and suitability of commercially available and prospective varieties of wheat, oats and barley for planting in North Carolina. The results of these tests are intended to aid the growers and agricultural workers in the selection of a variety best suited for their particular area of the state or region.

Wheat production in North Carolina for the 1973-74 season is forecast at 8,400,000 bushels. This would be an increase of 50 percent over the 1973 crop. Acreage to be harvested for grain is estimated at 210,000 or 50,000 acres above the 1973 harvested acreage.

It is estimated that the yield per acre for the 1974 crop will be 40 bushels per acre. This would be up five bushels from last year.

The United States winter wheat production is forecast at a new record high of 1,612 million bushels, 27 percent above the previous high set last year and 36 percent above the 1972 crop. This increase is attributed to more acres for harvest and a higher average yield.

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<sup>1/</sup> Professor in Charge of Variety Testing, Agricultural Research Supervisor and Agricultural Research Assistants, Department of Crop Science, North Carolina State University at Raleigh, respectively.

U. S. acreage to be harvested for grain is estimated at 45.8 million acres for 1974. This is 19 percent above 1973 and 31 percent over 1972. Yield per acre is expected to average 35.2 bushels per acre, nearly equal to the record high set in 1971 and more than two bushels above last year's average.

In North Carolina the oat acreage planted in the Fall of 1973 and Spring of 1974 was 155,000 acres. This was three percent less than last year's planted acreage and the lowest planted acreage since 1928.

The U. S. growers anticipated seeding a total of 18.9 million acres to oats. Combined seedings last fall and intentions this spring are off one percent from the 1973 acreage. Acreage devoted to oats has shown a downward trend since the mid-1950's and the intended 1974 seedings would be the smallest of this century.

The 1973-74 oat crop in North Carolina is estimated to yield 50 bushels per acre. This would be an increase of five bushels per acre over the 1972 crop.

In 1973 the barley production in North Carolina was harvested from 62,000 acres with a yield of 46 bushels per acre. The 1973 acreage is estimated at 70,000 acres. This is five percent below the 1973 crop and seven percent below the 1972 planted acreage. The price increased from 1972 to 1973 by an average of from 0.98 to \$1.50 per bushel.

Information on varietal performance is presented from six test locations in the state, three in the Piedmont and three in the Coastal Plain Area. In comparing the performance of varieties, data from the area which most nearly represents the grower's conditions should be used. Seasonal conditions differ from year to year; therefore, a

variety which looks superior for one year may not be consistently good, hence, varieties should be evaluated on the basis of performance over several years. Depending upon the release date of the entry, data are presented for performance from one to five years. All available data<sup>2/</sup> were used in determining the pathologic and agronomic characteristics of the varieties.

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<sup>2/</sup>Special acknowledgment is due Drs. T. T. Hebert and C. F. Murphy for their assistance in describing the characteristics of varieties.

## EXPERIMENTAL PROCEDURE

Commercial varieties and experimental lines developed by public and private agencies are included in these tests. Any individual or firm may make application for having entries included by writing the Department of Crop Science, North Carolina State University at Raleigh. A fee is charged on an entry basis for all private entries. Personnel of the testing program may include entries about which further information is desired.

## Agencies Sponsoring Entries

Coker's Pedigreed Seed Company	Hartsville, S. C.
Georgia Agricultural Experiment Station	Athens, Georgia
Kentucky Agricultural Experiment Station	Lexington, Kentucky
McNair Seed Company, Inc.	Laurinburg, N. C.
North Carolina Agricultural Experiment Station	Raleigh, N. C.
Purdue University Agricultural Experiment Station	Lafayette, Indiana
South Carolina Agricultural Experiment Station	Clemson, S. C.
University of Tennessee Agric. Expt. Station	Knoxville, Tennessee
Virginia Agricultural Experiment Station	Blacksburg, Virginia

## Test Locations

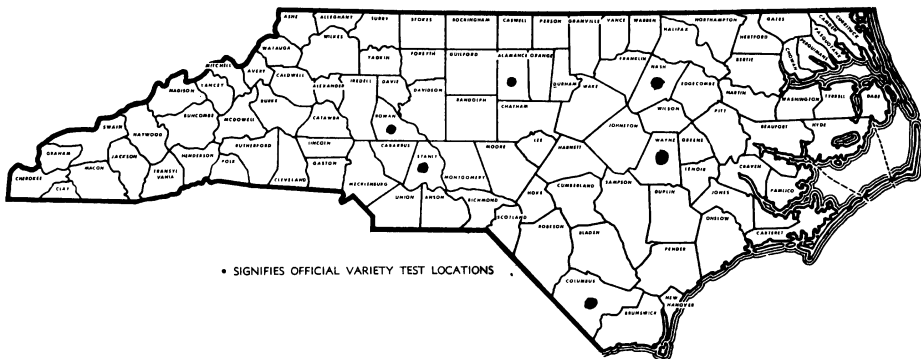
Six locations were used in 1973-74 with three in the Piedmont and three in the Coastal Plain as shown in Figure 1. Five tests were located on private farms<sup>1/</sup> and one was on a research station. A randomized block design with four replications was used at each location.<sup>2/</sup>

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<sup>1/</sup>The cooperative spirit and civic-minded service rendered by the farmers who provided land and the necessary cultural practices for these trials and the cooperation of the county agents are gratefully acknowledged.

<sup>2/</sup>Statistical analyses were made in the statistical laboratory under the supervision of Dr. J. O. Rawlings. This assistance is gratefully acknowledged.

1974  
LOCATION OF SMALL GRAIN PERFORMANCE TRIALS



CO-OPERATORS

PIEDMONT

Rowan County: Mr. Clyde McSwain, Superintendent, Piedmont Research Station, Salisbury, North Carolina  
County Extension Chairman, R. R. McNeely

Stanly County: Mr. Lester Moose, Route 1, New London, North Carolina  
County Extension Chairman, V. A. Huneycutt

Alamance County: Mr. Raymond Braxton, Route 2, Graham, North Carolina  
County Extension Chairman, George R. Coble

COASTAL PLAIN

Nash County: Mr. W. M. Winstead, Route 3, Nashville, North Carolina  
County Extension Chairman, W. R. Shackelford

Columbus County: Mr. Graham Harrelson, Route 4, Whiteville, North Carolina  
County Extension Chairman, Charles D. Raper

Wayne County: Mr. Wayland Price, Route 4, Mt. Olive, North Carolina  
County Extension Chairman, G. Mark Goforth, Jr.

## Cultural Practices

Cultural practices, such as seed bed preparation, date of planting, fertilization and topdressing were in accord with good farming practices and were uniform for all entries at a given location, Table 1. Several months prior to planting each test location, soil samples were obtained for the test field and fertilizer requirements made in accordance with the soil analysis report. Lime was applied, if needed, to adjust the pH to a desirable level for small grain production.

Starting in 1969 all tests were planted with cone-type, tractor-mounted, spring-loaded disc equipment. The disc allowed for more accurate seeding in areas with stubble or organic matter on the soil surface. The seeding rate was one gram per foot of row. The rows were spaced one foot apart. Each plot consisted of seven rows, 15 feet long with the two outside rows used as borders. The border rows were removed prior to harvest and only the five center rows were harvested. The date of planting and fertilization at planting is shown in Table 1 for each test location.

A seven foot combine was modified slightly for harvesting individual plots. Grain from individual plots was collected as it came from the elevator and weighed. The combine was stopped at the end of each plot for a short interval of time in order for the machine to clean out between plots prior to weighing the grain from the plot. A sample of grain was taken from each plot for the determination of test weight and moisture. All plots were adjusted to 13% moisture. All samples were run through a small thresher to remove the awns and foreign matter prior to taking test weights. The combine was used to more nearly simulate the conditions



under which these varieties would be harvested on farms and it appeared to give very satisfactory results.

Tests were topdressed with liquid nitrogen and weed control chemicals during February. Special acknowledgment is due F.C.X. Wholesale Services for furnishing the nitrogen for these tests.

Table 1. Cultural Practices for small grain tests - 1974.

Area and Cooperator	Fertilizer lbs/A & Grade	Topdress <sup>1/</sup> lbs/A and date	Date of planting	Date of harvesting
<u>Piedmont Area</u>				
Stanly County D. G. Harwood	350 lbs. 10-20-20	65 N Ammonium Nitrate March 1	October 17	Barley - June 10 Wheat - June 10 Oats - June 10
Alamance County Raymond Braxton	250 lbs. 10-20-20	55 N (liquid) Feb. 26	October 9	Barley - June 12 Oats - June 25 Wheat - June 12
Rowan County Clyde McSwain	600 lbs. 10-20-20		October 12	Barley - June 10 Oats - June 10 Wheat - June 10
<u>Coastal Plain Area</u>				
Nash County W. M. Winstead	500 lbs. 4-8-12	65 N (liquid) Feb. 27	October 11	Barley - June 7 Wheat - June 7 Oats - June 7
Wayne County Wayland Price	300 lbs. 10-20-20	70 N (liquid) Feb. 25	October 29	Barley - June 5 Oats - June 5 Wheat - June 5
Columbus County Graham Harrelson	700 lbs. 2-12-12	65 N (liquid) Feb. 25	October 16	Barley - Discarded Oats - Discarded Wheat - Discarded

<sup>1/</sup>All tests except Rowan were sprayed with 1/3 qt/acre of 2, 4-D for weed control at the time of topdressing with liquid nitrogen.

## Seasonal Conditions

The 1973 fall seasonal conditions in North Carolina were characterized by dry weather especially for two months during the normal small grain seeding period. In spite of this condition, by the end of November about 85 percent of the state's intended small grain acreage had been seeded. This was somewhat on schedule although the dry months were a problem with a shortage of moisture in the Piedmont and very limited moisture conditions in the Coastal Plain Area.

The six locations for the 1973-74 Official Variety Test; three in the Piedmont and three in the Coastal Plain were selected to represent small grain production areas.

September 1973: September weather was characterized by low amounts of precipitation with most areas recording from one to three inches short of normal rainfall.

October 1973: The dry weather continued during October except for a few showers near the Northern Coast as tropical storm Gilda move northward off shore. The departure from normal precipitation increased in many areas from two to three inches up to four to five inches below normal rainfall.

November 1973: Precipitation was reported at many of the reporting points in the state during November but the rainfall amounts were generally quite light. By the end of the month, the departure from normal had increased up to eight inches in the Raleigh area as a shortage since September 1. The Coastal Plain region was rated in poor shape as moisture supplies were inadequate.

January 1974: The first month of the 1974 year was characterized by precipitation totaling between one and three inches in the Mountain and

Piedmont Areas and spreading each week to three-fourths an inch or less in eastern portions of the state. The precipitation for the Mountain Area was in excess of the departure from normal but still less than normal in the Coastal Plain Areas. Temperatures averaged much above normal during the period with high readings of 60's and 70's common during the latter week of January.

February 1974: Unseasonably warm weather was experienced during this month with very little snow reported in the Mountains and only traces or none at all over the rest of the state. Moderate to heavy rainfall was reported in many sections and in between some of the short storms, pleasant weather prevailed with mild afternoon temperatures. The month ended with unseasonably warm conditions.

March 1974: Temperatures averaged above normal with record setting warm temperatures over many sections of the state. During the latter part of the month the Piedmont temperatures ranged around 80 on the 24th of March.

April 1974: Temperatures in April were slightly above the normal in the southeastern part of the state and again warm temperatures prevailed with high readings in the upper 70's to 80's.

May 1974: Temperatures averaged one to two degrees above normal with wide spread precipitation across the state. Most reporting points showed above average precipitation with Rocky Mount showing 3.6 inches departure from normal since the March 1 date. Open weather during the latter part of May was ideal for early harvest of small grain.

1973-74 General: The 1973-74 Small Grain Season was characterized by a very dry fall with unseasonably warm temperatures during the normally cold

months of January and February. This resulted in low vernalization of some of the wheat varieties. The warm winter weather resulted in a large amount of insect population and some diseases on the small grain crops. The dry fall of 1973 may have resulted in a lowering of the mildew infestation for the entries in the test.

## RESULTS AND DISCUSSION

The performance of the 1974 tests along with the previous four years are presented by crop and area in a tabular form in this report. Since the genetic expression of a variety is influenced greatly by the environment, it is best to have several years' data from which to draw conclusions. For example, if a variety appeared in the two-year average but not in the three-years average, then it must be compared only within the two years and not with the data in the three-year average since it is possible that the third year could have been extremely good or poor and not comparable.

The 1974 data presented in this report have been analyzed statistically and the least significant difference (L.S.D.), in terms of bushels per acre is given. Unless the difference between two varieties is greater than the L.S.D., the varieties should not be considered as being any different statistically.

## Barley

Table 5 shows the performance of barley in the Piedmont. The yields varied from a high of 88.6 bushels per acre for Keowee to 46.1 bushels for the variety, Rapidan. The mean of the test for the 1973-74 season was 69.8 bushels per acre compared to 62.7 bushels per acre in 1972-73. The yield of all entries was approximately seven bushels higher than the previous year and the mean of the test was 7.1 bushels higher than last year.

The test weights of 48.6 for Barsoy and 47.8 for Keowee were the highest test weights in pounds per bushel of all entries. Keowee continued to be the highest five year average of four entries common to the test for this period of time. The yield and test weight data for barley performance in the Piedmont are averages of three locations.

In the Coastal Plain Area, Table 6, shows the difference in yield between varieties and breeding lines. The mean of the test in bushels per acre was 51.7 for the average of two locations in the Coastal Plain. The highest yield was from the variety, McNair 601, at 65.6 bushels per acre. The test weight in pounds per bushel on the ten entries varied from 37.9 to 45.0 with a mean of 41.5. The mean test weight for 1973-74 season was 3.8 pounds less than last season's test weights. Barsoy showed the highest test weight at 45.0 with Rapidan recording the lowest at 37.9.

#### Oats

The data from the oat trials in North Carolina are recorded in Tables 7 and 8.

The mean of the test in the Piedmont was 89.0 with one entry averaging over 100 bushels per acre. The average test weight was 34.2 for the Piedmont. The highest yield was 108.9 for the experimental, NC 43. The best test weight was 36.7 for Roanoke and the lowest test weight of 30.2 for Cumberland.

In the Coastal Plain the mean of the test was 92.7 for two locations. The mean test weight was 32.8 pounds per bushel. NC 43 was highest in yield at 114.5 bushels per acre with Coker 227 next at 108.1. Test weight on these entries was 34.4 and 34.1 pounds per bushel respectively. The mean of the test in yield increased 13.3 over the 1973 season.

#### Wheat

Table 9 shows the data on wheat trials in the Piedmont. The mean of the test for the 1974 season was 51.5 compared to 44.3 bushels per acre for 1973. The mean test weight in pounds per bushel for 1974 was 58.6 compared with 52.9 last year. The highest yielding entries were Abe with 61.8 bushels per

acre followed closely by Arthur 71 at 58.1 bushels per acre. The highest test weight was on Coker 68-15 at 62.3 pounds per bushel. In the three year average McNair 4823 was high with 53.5 bushels per acre.

The wheat yields in the Coastal Plain Area were an improvement over last year. The mean of the test increased from 38.1 bushels per acre as the mean for 1973 compared to 43.4 bushels per acre for 1974 mean. This was a 5.3 bushel per acre increase.

For the three-year average, the experimental N.C. 9 and McNair 701 were the highest yielding entries at 39.0.

#### Lodging

Lodging data are given in Table 11. A one-year, two-year, three-year and four-year comparison is shown. In 1974 a total of five locations was used for lodging data on barley, oats and wheat. If no lodging was recorded at a specific location, data on this location was used for the average along with percent lodging from other locations. When a test was discarded no data was used for lodging.



Table 2. Characteristics of barley varieties\*

Variety	Mildew resist- ance	Leaf rust resist- ance	Scald resist- ance	Lodging resist- ance	Winter hardi- ness	Maturity	Test Weight lb/bu	Length of awns
Barsoy	Good	Poor	Fair	Fair	Good	Very Early	High	Long
Clayton	Good	Excellent	Fair	Poor	Good	Early	Med.	Short
Jefferson	Good	Fair	Good	Good	Excellent	Early	Med.	Short
Keowee	Good	Poor	Fair	Poor	Good	Early	High	Long
McNair 601	Good	Fair	Fair	Good	Good	Early	Med.	Short
Rapidan	Good	Good	Fair	Fair	Good	Early	Med.	Short
Volbar	Fair	Fair	Good	Good	Good	Medium	High	Long

Table 3. Characteristics of oat varieties\*

Variety	Crown rust resist- ance	Smut resist- ance	Blight resist- ance	Mosaic resist- ance	Maturity	Winter Hardi- ness	Lodging resist- ance	Height of Straw	Test Weight lb/bu
Carolee**	Fair	Good	Good	Fair	Med.	Good	Good	Med.	Med.
Coker 66-22	Fair	Good	Good	Good	Med.	Good	Fair	Med.	Med.-High
Coker 227	Excellent	Good	Good	Good	Med.-Early	Good	Good	Med.	Med.
Cumberland	Fair	Good	Good	Good	Med.	Good	Good	Med.	Low
Roanoke	Fair	Poor	Good	Good	Late	Good	Fair	Tall	High
Windsor	Fair	Good	Excellent	Good	Med.	Good	Good	Med.	Med.-High
Yancey	Fair	Good	Good	Fair	Med.	Good	Good	Short	Med.

\*These characteristics based upon all available observations.

\*\*Appears to have tolerance to barley yellow dwarf virus.

Table 4. Characteristics of wheat varieties\*

Variety	Leaf rust resist- ance	Mildew resist- ance	Mosaic resist- ance	Maturity	Winter Hardi- ness	Lodging resist- ance	Height of Straw	Test Weight lb/bu	Soft Wheat Milling Quality
Abe	Good	Good	Good	Med.	Excellent	Good	Med.	High	Good
Arthur 71	Good	Good	Good	Med.	Excellent	Good	Semi-dwarf	High	Good
Blueboy II	Good	Poor	Good	Med.	Excellent	Excellent	Semi-dwarf	Low	Good
McNair 1813**	Good	Good	Good	Med.	Good	Good	Semi-dwarf	High	Good
Coker 68-15	Good	Poor	Good	Med.	Good	Excellent	Semi-dwarf	High	Good
Holley	Good	Good	Good	Early	Poor	Good	Med.	High	Fair
McNair 4823	Good	Good	Good	Late	Excellent	Excellent	Semi-dwarf	High	Good
McNair 1587	Good	Good	Fair	Med.	Good	Excellent	Med.	High	Good
McNair 701**	Good	Good	Good	Med. Early	Good	Good	Semi-dwarf	Med.	Good
Oasis	Good	Good	Good	Med.	Excellent	Excellent	Med.	High	Good

\*These characteristics based upon all available observations.

\*\*Resistant to Hessian Fly.

Table 5. Summary of BARLEY performance trials in the PIEDMONT

Variety or Line	1 yr. Avg. <sup>1/</sup> 1974		2 yr. Avg. 1973-1974		3 yr. Avg. 1972-1974		4 yr. Avg. 1971-1974		5 yr. Avg. 1970-1974	
	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu
Clayton	74.2	45.1	71.2	43.4	66.4	42.5	68.6	42.8	72.0	43.3
McNair 601	51.4	43.6	45.1	43.0	45.5	42.1	52.4	42.4	59.2	42.9
Keowee	88.6	47.8	80.8	46.3	78.6	44.9	80.2	45.7	83.7	46.2
Rapidan	46.1	42.6	49.5	42.0	54.2	41.2	62.8	41.6	70.5	42.4
*N.C. 83	61.7	44.6	65.2	42.4	64.2	40.6	70.4	41.4		
*N.C. 74	78.0	46.8	60.6	45.0	73.6	44.6				
Jefferson	69.5	45.3	64.8	43.8	62.7	42.3				
Barsoy	77.8	48.6	71.5	47.2						
Volbar	75.7	46.1								
*Va. 70-14-105	74.5	43.8								
<u>Mean of Test</u>	<u>69.8</u>	<u>45.4</u>	<u>63.6</u>	<u>44.1</u>	<u>63.6</u>	<u>42.6</u>	<u>66.9</u>	<u>42.8</u>	<u>71.4</u>	<u>43.7</u>
L.S.D. (.05)	16.8									
(.01)	23.1									
C.V. ( % )	13									

<sup>1/</sup> Average of Rowan, Stanly and Alamance County Locations.

Table 6. Summary of BARLEY performance trials in the COASTAL PLAIN

Variety or Line	1 yr. Avg. <sup>1/</sup> 1974		2 yr. Avg. 1973-1974		3 yr. Avg. 1972-1974		4 yr. Avg. 1971-1974		5 yr. Avg. 1970-1974	
	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu
Keowee	56.2	43.1	60.2	45.2	66.5	44.4	70.9	45.2	71.6	46.3
Clayton	51.2	40.6	55.2	42.6	63.5	42.6	68.8	42.8	68.8	43.6
McNair 601	65.6	40.0	62.4	42.4	65.2	42.3	69.8	43.0	70.3	44.0
Rapidan	29.5	37.9	36.0	40.9	50.2	40.5	58.4	41.4	60.5	42.6
*N.C. 83	53.6	41.3	48.2	42.4	56.9	40.4	59.9	41.2		
*N.C. 74	63.6	43.9	62.4	44.2	72.2	44.3				
Jefferson	32.6	41.2	38.4	43.6	47.6	42.9				
Barsoy	61.9	45.0	61.0	46.6						
Volbar	60.8	42.4								
*Va. 70-14-105	42.0	39.5								
<u>Mean of Test</u>	<u>51.7</u>	<u>41.5</u>	<u>53.0</u>	<u>43.5</u>	<u>60.3</u>	<u>42.5</u>	<u>65.6</u>	<u>42.7</u>	<u>67.8</u>	<u>44.1</u>
L.S.D. (.05)	10.8									
(.01)	15.5									
C.V. ( % )	16									

<sup>1/</sup> Average of Nash and Wayne County Locations.

\*Experimentals.

Table 7. Summary of OAT performance trials in the PIEDMONT

Variety or Line	1 yr. Avg. <sup>1/</sup> 1974		2 yr. Avg. 1973-1974		3 yr. Avg. 1972-1974		4 yr. Avg. 1971-1974		5 yr. Avg. 1970-1974	
	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu
Carolee	92.6	32.4	88.6	31.9	92.0	32.5	96.9	33.2	94.8	33.1
Roanoke	64.8	36.7	59.7	35.2	66.8	34.7	73.7	35.8	73.0	35.4
Yancey	83.2	34.1	87.8	33.2	94.2	33.6	100.7	34.4	98.3	34.2
Windsor	94.0	35.0	88.8	33.9	101.2	34.3	110.7	35.5	109.0	35.1
Coker 66-22	89.1	34.3	84.5	33.8	84.4	34.0	93.6	35.0	94.9	34.8
*N.C. 43	108.9	35.4	110.6	34.2						
Cumberland	80.4	30.2								
Coker 227	98.7	35.2								
<u>Mean of Test</u>	<u>89.0</u>	<u>34.2</u>	<u>86.7</u>	<u>33.6</u>	<u>87.7</u>	<u>33.8</u>	<u>95.1</u>	<u>34.8</u>	<u>94.0</u>	<u>34.5</u>
L.S.D. (.05)	17.6									
(.01)	24.4									
C.V. (%)	12									

<sup>1/</sup>Average of Rowan, Stanly and Alamance County Locations.

Table 8. Summary of OAT performance trials in the COASTAL PLAIN

Variety or Line	1 yr. Avg. <sup>1/</sup> 1974		2 yr. Avg. 1973-1974		3 yr. Avg. 1972-1974		4 yr. Avg. 1971-1974		5 yr. Avg. 1970-1974	
	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu
Carolee	100.8	31.1	96.7	32.6	90.7	32.0	96.2	32.0	95.6	33.2
Roanoke	68.2	33.6	64.0	34.1	69.9	32.9	73.0	32.9	73.4	34.2
Yancey	79.3	33.4	69.1	33.8	65.9	32.1	68.2	32.4	71.2	33.6
Windsor	102.8	34.0	92.0	34.4	85.4	32.9	92.7	33.0	93.7	34.2
*N.C. 43	114.5	34.4	97.6	35.4						
Coker 66-22	89.5	33.0								
Cumberland	83.5	28.8								
Coker 227	108.1	34.1								
*N.C. 1373-1	104.1	33.6								
*N.C. 1373-2	76.6	31.7								
<u>Mean of Test</u>	<u>92.7</u>	<u>32.8</u>	<u>83.9</u>	<u>34.1</u>	<u>78.0</u>	<u>32.5</u>	<u>82.5</u>	<u>32.6</u>	<u>83.5</u>	<u>33.8</u>
L.S.D. (.05)	17.9									
(.01)	25.7									
C.V. (%)	12									

<sup>1/</sup>Average of Nash and Wayne County Locations.

\*Experimentals.

Table 9. Summary of WHEAT performance trials in the PIEDMONT

Variety or Line	1 yr. Avg. <sup>1/</sup> 1974		2 yr. Avg. 1973-1974		3 yr. Avg. 1972-1974		4 yr. Avg. 1971-1974		5 yr. Avg. 1970-1974	
	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu
McNair 1587	55.3	59.1	52.0	56.0	51.3	55.9	54.2	55.5	60.0	55.7
Coker 68-15	52.7	62.3	45.4	58.8	45.2	58.6	48.3	58.5	54.4	58.7
McNair 4823	51.2	57.4	54.2	55.5	53.5	56.2	55.1	56.6	60.7	57.1
Blueboy II	49.0	56.7	40.9	53.4	37.0	53.0	42.4	53.4		
*N.C. 9	44.9	55.8	41.8	53.4	40.7	53.3				
Arthur 71	58.1	60.9	55.5	58.0						
Abe	61.8	60.5	59.4	57.8						
Oasis	57.9	61.0								
Holley	43.7	60.2								
*Va. 68-24-42	46.2	55.9								
*Va. 70-52-22	56.7	56.4								
McNair 701	40.1	57.6								
<u>Mean of Test</u>	<u>51.5</u>	<u>58.6</u>	<u>49.9</u>	<u>56.1</u>	<u>45.5</u>	<u>55.4</u>	<u>50.0</u>	<u>56.0</u>	<u>58.4</u>	<u>57.2</u>
L.S.D. (.05)	13.0									
(.01)	17.7									
C.V. (%)	12									

<sup>1/</sup>Average of Stanly, Rowan and Alamance County Locations.

Table 10. Summary of WHEAT performance trials in the COASTAL PLAIN

Variety or Line	1 yr. Avg. <sup>1/</sup> 1974		2 yr. Avg. 1973-1974		3 yr. Avg. 1972-1974		4 yr. Avg. 1971-1974		5 yr. Avg. 1970-1974	
	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu	bu/A	lbs/bu
Coker 68-15	41.5	59.8	38.9	61.0	33.8	58.0	38.6	57.1	39.9	58.4
McNair 701	43.5	55.8	43.2	56.1	39.0	53.6	44.1	54.1		
McNair 1813	37.7	57.1	39.0	57.6	36.3	55.0	41.7	54.9		
Blueboy II	28.4	53.5	28.0	54.6	24.5	52.6				
*N.C. 9	44.3	56.4	46.2	57.0	39.0	53.2				
Arthur 71	43.0	59.2	40.8	60.0						
Abe	49.4	58.5	47.2	59.6						
McNair 1587	45.3	57.0								
Oasis	48.1	59.5								
Holley	42.7	57.6								
*Va. 68-24-42	55.0	55.1								
*Va. 70-52-22	41.8	55.2								
<u>Mean of Test</u>	<u>43.4</u>	<u>57.1</u>	<u>40.5</u>	<u>58.0</u>	<u>34.5</u>	<u>54.5</u>	<u>41.5</u>	<u>55.4</u>		
L.S.D. (.05)	9.0									
(.01)	12.6									
C.V. (%)	13									

<sup>1/</sup>Average of Nash and Wayne County Locations.

\*Experiment als.

Table 11. Lodging Data

Variety or Line	1 yr. Avg.	2 yr. Avg.	3 yr. Avg.	4 yr. Avg.
<u>BARLEY</u>	<u>1974</u>	<u>1973-1974</u>	<u>1972-1974</u>	<u>1971-1974</u>
McNair 601	27	22	30	28
Clayton	24	30	44	38
Keowee	23	29	44	37
Rapidan	40	31	44	37
*N.C. 83	13	24	35	28
Jefferson	3	10	17	
Barsoy	11	18		
Volbar	32			
*Va. 70-14-105	6			
<u>OATS</u>	<u>1974</u>	<u>1973-1974</u>	<u>1972-1974</u>	<u>1971-1974</u>
Carolee	60	42	55	41
Roanoke	51	52	50	38
Yancey	43	32	42	31
Windsor	30	24	41	31
Coker 66-22	71	48		
Cumberland	46			
Coker 227	40			
*N.C. 1373-1	25			
*N.C. 1373-2	14			
<u>WHEAT</u>	<u>1974</u>	<u>1973-1974</u>	<u>1972-1974</u>	<u>1971-1974</u>
Coker 68-15	0	9	27	20
Blueboy II	0	5	20	15
McNair 701	0	0	23	17
McNair 1587	0	8	21	16
*N.C. 9	0	6	18	14
McNair 4823	0	0	0	0
McNair 1813	0	0	18	14
Arthur 71	0	8	5	4
Abe	0	7	5	4
*Va. 70-52-22	0			
*Va. 68-24-42	0			
Oasis	0			
Holley	0			

\*Experimentals.