RESULTS OF

BARLEY, OAT AND WHEAT VARIETAL TESTS CONDUCTED IN VIRGINIA IN 1960

RESEARCH REPORT No. 45 OCTOBER 1960

Department of Agronomy

VIRGINIA AGRICULTURAL EXPERIMENT STATION
VIRGINIA POLYTECHNIC INSTITUTE

BLACKSBURG, VIRGINIA

Table of Contents

Results of Small Grain Varietal Tests Conducted in Virginia in 1960[1/]

Compiled by
J. L. Tramel, T. M. Starling and C. W. Roane[2/]

The Agronomy Department of the Virginia Agricultural Experiment Station conducts small grain varietal tests at eight locations in the State as a part of the small grain breeding and improvement program. The objective of these tests is to determine which varieties of wheat, oats and barley are most suitable, from the standpoint of yield, quality, disease and other factors, for production in various areas of the State. Experimental strains and varieties released from both public and private breeding programs are included in these tests. Although an effort is made to test all new varieties released in this area, there is no intention to imply that varieties not included in these tests will not perform well in Virginia.

The small grain varietal recommendations for the State are based on data presented in this report and on data from previous tests. Before a variety is recommended to Virginia growers it must have been tested at

---

1/ The following individuals were responsible for growing the tests and collecting the data at the various test locations: Painter - John G. Rogers; Petersburg - M. T. Carter; Warsaw - H. M. Camper, Jr. and W.L. Sisson; Charlotte Court House - R. D. Sears; Orange - G. D. Jones; McCormick - W. H. McClure; Emory - F. S. McClaugherty; Blacksburg - J. L. Tramel, T. M. Starling, A. M. Price and C. W. Roane. The data were analyzed under the supervision of Dr. C. Y. Kramer of the Virginia Polytechnic Institute Statistical Laboratory.

2/ Assistant Professor of Agronomy, Professor of Agronomy and Associate Professor of Plant Pathology, respectively.

several locations in the State for a minimum of two years. The results of the tests conducted in 1960 and the two and three year averages for varieties tested for these periods are included in this report.

Test locations and areas of adaptation

Small grain varietal recommendations are made for three general areas of Virginia: (1) Eastern or Coastal Plain, which includes the test locations of Painter, Petersburg and Warsaw; (2) Middle or Piedmont, which includes the test locations of Charlotte Court House and Orange; (3) Western or West of the Blue Ridge, which includes the test locations of Blacksburg, Emory and McCormick.

Winterkilling is an important factor in determining which varieties to recommend for the various regions of the State. Varieties which perform well in the Coastal Plain area may not have sufficient winter hardiness for the Piedmont and West of the Blue Ridge areas. It can be assumed, however, that varieties recommended for one region of the State should perform well in contiguous areas of other regions.

Growing season and other factors

Moisture at planting time was ample at all test locations for germination and establishment of the crops. Stands were good in all tests. There was very little winterkilling in any of the tests in 1959-60. There was heavy snow cover in the Western and Piedmont areas during the latter part of February and early March.

The fall sown oat test at Warsaw was severely damaged by hail and was not harvested. The wheat test at Warsaw also was damaged to some extent by the same hail storm and this may partially explain the low wheat yields at this location. The midwinter oat test was not planted at Warsaw and Painter due to unfavorable weather conditions at planting time. The midwinter oat test was planted extremely late at Charlotte Court House and some entries failed to produce heads.

Halo blight, a bacterial disease of oats which attacks the leaves and crowns, was prevalent in varying degrees in the fall sown oat tests at all locations. Arlington, Atlantic, Bronco, Lee and Forkedeer were susceptible to halo blight. Victorgrain 48-93, Mid-South and Dubois were resistant. Fulwood, Woodgrain, Moregrain and Earlygrain were intermediate in reaction to the disease. The data on the amount of infection of the varieties at the various locations are given in Table 16.

Victoria blight, which normally causes little or no damage to susceptible oat varieties planted on the recommended date in the fall, caused damage in the fall sown oat tests at several locations. Susceptible varieties in the midwinter planted oat test at Orange also were severely damaged. Among the varieties susceptible to Victoria blight were Victorgrain 48-93, Fulgrain, Fulwood, Woodgrain and Arlington. Atlantic and Bronco were intermediate in reaction. Lee, Forkedeer, Moregrain, Earlygrain and Mid-South were resistant.

Loose smut of oats can be controlled by seed treatment with the proper chemicals. Since all varieties tested may not have been treated,

those varieties not treated probably tend to have a higher smut count than those which were treated to prevent smut. Loose smut of barley and wheat may be controlled by hot water treatment or a cold water-soak method. Some of the varieties grown in the tests may have been treated prior to planting and some varieties may not have been treated for control of this disease. Thus it is possible for some varieties to have more smut than others. Varieties having a high smut count may be assumed to be susceptible, but low smut counts do not necessarily imply genetic resistance to the disease.

Procedure

Small grain varieties and strains were compared in three-row plots replicated six times in randomized complete block designs. The rows were one foot apart and 20 feet long. A rod-long section of the center row of each plot was harvested to determine yield. The samples were threshed in nursery threshers and grain weights were recorded in grams or hundredths of a pound per plot and yields were convereted to bushels per acre. Notes on growth characteristics and reaction to diseases were recorded at some locations and are included in this report.

Interpretation of the data

The yield 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 at the bottom of each 1960 yield column. Unless the yield difference between two varieties is as great or greater than the

least significant difference, the varieties should not be considered as having yielded differently from each other. If none of the varieties in a test were significantly different in yield, this is indicated by N.S.D. at the bottom of the column of data, meaning no significant difference. The regional averages for yield and other characteristics are given where applicable. Notes were not taken on all characteristics at all locations but the data presented are averages based on notes taken from the tests conducted in the region and the number of tests used in computing the averages is indicated at the top of each column.

Recommended Varieties

The data included in this report and data from other tests have been used to determine the small grain varietal recommendations for the various regions of Virginia for 1960.

COASTAL PLAIN	PIEDMONT	WEST OF BLUE RIDGE
Spring Oats		
Spring Oats are not recommended for this area. If Spring Oats are planted, use one of the varieties recommended for the Piedmont	Andrew Clarion Mo. 0-205 Newton	Andrew Clarion Mo. 0-205 Newton
Winter Oats		
Arlington Atlantic(1) Fulwood (2) Moregrain (2) Lee (6) Victorgrain 48-93(2) Woodgrain (2) Fulgrain (1)(2)	Arlington Atlantic Bronco (3) Forkedeer (1)(3) Lee (6) (Varieties recommended for late winter planting in Coastal Plain may also be used for this purpose in the Piedmont)	Arlington (5) Atlantic Bronco Forkedeer Lee (6)
Barley		
Davie (semi-bearded) Dayton (semi-smooth bearded) Colonial 2 (semi-bearded) Hudson (rough-bearded) Kenbar(semi-smooth bearded) Wong (semi-bearded)	Davie (4) Dayton Hudson Kenbar Wong	Dayton Hudson Kenbar Kentucky #1 (rough bearded) Wong
Wheat		
Anderson (smooth) Atlas 66 (smooth) Coker 47-27 (smooth) Seneca (smooth) Tayland (smooth) Taylor 49 (smooth) Thorne (smooth)	Anderson Atlas 66(4) Coker 47-27 (4) Seneca Tayland Taylor 49 Thorne	Dual Pennoll(1) (smooth) Seneca Tayland Taylor 49 Thorne

(1) Will be dropped from recommended list after 1959-60.
(2) Recommended also for late winter (February) planting in Coastal Plain and Piedmont.
(3) Recommended North of James River only.
(4) Recommended South of James River only.
(5) Recommended in Lee County and low elevations of Scott County.
(6) Formerly listed as Lee Cold Proof.

Table 1. Performance of barley varieties tested West of the Blue Ridge in 1960.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (Inches)	Spring stand (%)
	Blacksburg	Emory	McCormick	Average	Rank					
Number of Tests				3		3	2	3	3	3
Wong	57.0	66.6	52.0	58.5	13	43.3	5/13	49	38	94
Kentucky 1	60.5	58.3	53.1	57.3	15	43.7	5/11	44	37	96
Davie	65.4	88.8	55.5	69.9	6	41.4	5/12	27	34	96
Awnletted Hudson[a]	63.2	70.7	44.6	59.5	12	42.0	5/14	36	36	97
Kenbar (x) Davie, 392[a]	72.7	99.0	51.7	74.5	1	45.0	5/12	28	32	91
57-39-23[a]	66.1	96.0	51.2	71.1	4	44.2	5/13	23	35	96
58-39-40[a]	62.8	74.7	54.1	63.9	9	43.5	5/16	18	36	91
58-40-27[a]	66.0	69.6	54.1	63.2	10	42.0	5/13	18	32	91
Wong x Bolivia, G-38[a]	66.2	70.9	42.6	59.9	11	43.4	5/12	33	38	94
Calhoun (x) Bolivia, 954[a]	68.6	92.8	57.2	72.9	2	43.9	5/14	29	36	94
Davie x Harbine, 1487[a]	64.6	87.2	52.4	68.1	7	43.7	5/13	7	29	93
Hudson	59.1	77.9	59.7	65.6	8	47.3	5/13	32	35	95
Colonial 2	72.7	92.8	48.9	71.5	3	41.8	5/14	18	32	93
Rogers	67.8	80.2	64.5	70.8	5	47.7	5/14	7	33	93
Kenbar	62.4	60.9	50.7	58.0	14	41.5	5/10	43	33	94
L.S.D.(.05)	N.S.D.	13.2	6.2							

(a) Experimental varieties, not commercially available. See page 38 for parentage.

Table 2. Average performance of barley varieties tested West of the Blue Ridge in 1959-60 and 1958-59-60.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)	Spring stand (%)
	Blacks-burg	Emory	McCormick	Average	Rank					
				1959-60						
Number of tests	2	2	2	6		6	4	6	6	5
Wong	63.0	71.5	58.1	64.2	4	43.2	5/8	32	39	94
Kentucky 1	65.9	61.5	57.8	61.7	5	42.9	5/6	39	39	96
Davie	66.7					41.8(a)	5/8	22(a)	35(a)	95(a)
Kenbar x Davie, 392	76.4					45.5(a)	5/9	24(a)	33(a)	90(a)
Wong x Bolivia, G-38	66.1	76.0	51.3	64.4	3	42.7	5/7	18	41	90
Davie x Harbine, 1487	65.6					44.0(a)	5/7	7(a)	30(a)	92(a)
Hudson	65.9	77.9	63.5	69.1	1	43.7	5/8	21	37	95
Kenbar	69.8	65.5	61.1	65.5	2	39.8	5/5	33	34	94
				1958-59-60						
Number of tests	3	3	3	9		9	5	7	9	7
Wong	55.7	56.1	42.8	51.5	5	43.3	5/9	33	37	90
Kentucky 1	61.4	50.3	47.4	53.0	3	43.6	5/8	39	37	96
Wong x Bolivia, G-38	60.3	57.9	38.6	52.2	4	43.0	5/9	21	41	87
Hudson	62.3	66.9	53.7	61.1	1	44.8	5/9	20	36	95
Kenbar	66.3	57.1	50.8	58.1	2	40.6	5/6	35	34	94

(a) Data from 4 tests only.

Table 3. Performance of barley varieties tested in the Piedmont in 1960.

Variety or selection	Yield in bushels per acre: Charlotte Court House	Orange	Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)	Spring Stand (%)
Number of tests			2		2	2	2	2	1
Wong	63.6	62.8	63.2	15	44.8	4/27	45	33	96
Kentucky 1	44.4	66.1	55.3	16	41.5	4/27	48	30	95
Davie	69.5	76.8	73.2	5	42.8	4/28	36	30	95
Awnletted Hudson[(a)]	66.7	63.5	65.1	13	44.0	4/29	42	33	96
Kenbar x Davie, 392[(a)]	90.7	72.7	81.7	1	46.0	4/28	25	29	95
57-39-23[(a)]	72.8	79.3	76.1	2	44.8	4/27	37	32	95
58-39-40[(a)]	48.6	57.8	53.2	17	41.5	4/28	50	30	97
58-40-27[(a)]	69.5	61.3	65.4	12	40.8	4/27	39	28	96
Wong x Bolivia, G-38[(a)]	68.6	58.7	63.7	14	44.5	4/25	47	35	94
58-39-30[(a)]	76.1	56.7	66.4	11	42.0	4/28	24	31	97
58-40-13[(a)]	82.7	55.5	69.1	9	40.5	4/27	36	28	95
Calhoun x Bolivia 954[(a)]	73.7	77.6	75.6	3	44.3	4/28	43	32	95
Davie x Harbine, 1487[(a)]	83.8	60.4	72.1	7	46.0	4/28	34	28	96
Hudson	66.0	73.3	69.7	8	44.5	4/27	31	32	95
Colonial 2	68.0	76.3	72.2	6	42.3	4/29	44	30	96
Rogers	69.7	76.8	73.3	4	43.5	4/28	31	34	94
Kenbar	64.7	68.6	66.7	10	43.8	4/25	40	30	95
L.S.D.(.05)	14.8	8.2							

(a) Experimental varieties, not commercially available. See page 38 for parentage.

Table 4. Average performance of barley varieties tested in the Piedmont in 1959-60 and 1958-59-60.

Variety or selection	Yield in bushels per acre: Charlotte Court House	Orange	Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)	Spring stand (%)
1959-60									
Number of tests	2	2	4		4	4	4	4	2
Wong	61.1	53.9	57.5	5	41.9	4/25	49	38	98
Davie	68.1	69.3	68.7	2	40.7	4/27	42	36	97
Kenbar x Davie, 392	79.8	74.9	77.4	1	43.3	4/27	31	34	98
Wong x Bolivia, G-38	61.1	55.1	58.1	4	41.3	4/23	38	39	97
Hudson	59.7	59.3	59.6	3	42.3	4/27	41	37	98
Kenbar	56.1	58.9	57.5	5	40.2	4/24	43	34	98
1958-59-60									
Number of tests	3	3	6		6	6	6	6	4
Wong	57.5	51.6	54.6	5	42.6	4/28	35	38	94
Davie	61.9	61.5	61.7	1	41.6	4/29	29	33	92
Wong x Bolivia, G-38	56.9	53.7	55.4	4	42.0	4/27	28	38	94
Hudson	55.9	60.4	58.3	2	43.5	4/30	28	37	97
Kenbar	53.0	60.5	56.8	3	40.5	4/26	30	33	96

Table 5. Performance of barley varieties tested in the Coastal Plain in 1960.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
	Painter	Peters-burg	Warsaw	Average	Rank				
Number of tests				3		2	2	3	2
Wong	74.0	70.4	53.2	65.9	10	44.1	4/28	6	39
Davie	71.7	61.4	72.4	68.5	7	43.0	4/27	7	34
Awnletted Hudson	65.3	64.5	46.7	58.8	16	43.8	5/2	4	37
Kenbar x Davie, 392[a]	83.0	59.5	67.3	69.9	6	45.7	4/29	1	31
57-39-23[a]	83.5	69.9	79.6	77.7	1	45.2	4/29	8	36
58-39-40[a]	67.6	67.5	57.0	64.0	14	43.1	4/30	8	36
58-40-27[a]	85.3	72.9	62.4	73.5	4	42.4	4/27	4	33
Wong x Bolivia,G-38[a]	73.5	59.7	60.2	64.5	11	44.0	4/26	8	40
58-39-30[a]	68.5	65.2	71.0	68.2	8	42.9	4/30	1	34
58-40-13[a]	68.1	67.0	52.9	62.7	15	42.8	4/28	4	32
Calhoun x Bolivia, 954[a]	84.9	69.2	72.0	75.4	3	45.6	4/28	7	37
Davie x Harbine, 1487[a]	73.5	57.4	70.0	67.0	9	45.6	4/28	1	29
Hudson	77.1	55.1	61.0	64.4	12	46.4	4/30	4	36
Colonial 2	79.4	75.2	74.3	76.3	2	43.0	4/28	4	33
Rogers	79.0	71.4	63.5	71.3	5	45.3	5/3	2	35
Kenbar	75.8	61.0	55.8	64.2	13	42.8	4/26	7	33
L.S.D.(.05)	10.9	7.5	9.3						

(a) Experimental varieties, not commercially available. See page 38 for parentage.

Table 6. Average performance of barley varieties tested in the Coastal Plain in 1959-60 and 1958-59-60.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
	Painter	Peters-burg	Warsaw	Average	Rank				
				1959-60					
Number of tests	2	2	2	6		4	4	5	4
Wong	72.3	61.4	75.7	69.8	2	43.6	4/21	6	42
Davie	74.8	53.2	83.3	70.4	1	42.0	4/22	6	39
Wong x Bolivia, G-38	72.9	50.8	76.0	66.6	3	43.0	4/20	11	43
Hudson	75.7	45.0	77.0	65.9	4	46.8	4/25	3	38
Kenbar	73.2	50.3	69.4	64.3	5	43.4	4/20	6	36
Kenbar x Davie, 392		51.6	81.4			45.2	4/23	2	35
Davie x Harbine, 1487		54.4	77.8			43.8	4/22	2	34
				1958-59-60					
Number of tests	3	3	3	9		6	6	7	6
Wong	59.1	55.3	70.4	61.6	2	44.1	4/27	10	41
Davie	63.4	45.6	78.5	62.5	1	42.2	4/26	6	37
Wong x Bolivia, G-38	61.1	46.2	75.0	60.8	4	43.5	4/26	15	41
Hudson	64.6	42.1	74.6	60.4	5	46.6	4/30	4	37
Kenbar	62.5	47.8	72.2	60.8	4	43.0	4/25	10	35

Table 7. Disease reaction of barley varieties tested in 1960.

Variety or selection	Leaf rust (%)	Heads of loose smut per rod row			Net & spot blotch (%)		Scald (%)
	Blacksburg	Blacksburg	Warsaw	Petersburg	Petersburg	Blacksburg	Blacksburg
Wong	17	0	1	0	22	22	0
Kentucky 1	16	5				17	0
Davie	0	0	0	0	28	33	0
Awnletted Hudson	8	1	1	0	28	30	0
Kenbar x Davie, 392	0	0	0	0	23	28	0
57-39-23	0	0	0	0	45	45	1
58-39-40	0	0	0	0	22	35	0
58-40-27	0	0	0	0	13	20	0
Wong x Bolivia, G-38	0	0	0	0	25	30	0
58-39-30			1	0	25		
58-40-13			0	0	27		
Calhoun x Bolivia, 954	0	0	0	0	20	47	0
Davie x Harbine, 1487	0	0	1	0	27	35	0
Hudson	13	2	1	2	23	20	0
Colonial 2	21	6	3	5	23	23	8
Rogers	1	0	0	0	18	37	0
Kenbar	4	9	15	33	32	22	0

Table 8. Performance of fall oat varieties tested West of the Blue Ridge in 1960.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)	Spring stand (%)
	Blacksburg	Emory	McCormick	Average	Rank					
Number of tests				3		3	2	2	3	3
Atlantic	50.9	96.8	61.0	69.6	2	32.3	5/21	30	36	92
Dubois	37.1	102.7	60.1	66.6	4	34.5	5/21	6	33	97
Bronco	37.4	112.8	55.8	68.7	3	30.8	5/25	17	33	91
58-30-2 (a)	44.4	75.4	43.1	54.3	11	32.7	5/24	29	32	92
58-30-21 (a)	42.7	86.7	48.6	59.3	9	31.4	5/26	36	34	93
C.I. 7128 (a)	22.0	103.3	65.7	63.7	7	28.4	5/22	51	28	93
C.I. 7129 (a)	40.7	102.9	55.6	66.4	5	30.2	5/21	50	34	95
Norline	27.8	92.1	62.4	60.8	8	29.6	5/26	47	31	93
59-1-20 (a)	39.6						5/26 (b)	10 (b)	34 (b)	91 (b)
Arlington	39.8	104.4	47.8	64.0	6	32.3	5/21	48	35	90
Forkedeer	59.2	109.5	49.4	72.7	1	33.0	5/22	54	36	98
Lee	41.9	78.6	43.5	54.7	10	32.9	5/23	25	32	90
L.S.D. (.05)	6.3	16.4	9.0							

(a) Experimental varieties, not commercially available. See page 38 for parentage.

(b) Data from Blacksburg test only.

Table 9. Average performance of fall oat varieties tested West of the Blue Ridge in 1959-60 and 1958-59-60.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)	Spring stand (%)
	Blacksburg	Emory	McCormick	Average	Rank					
1959-60										
Number of tests	2	2	2	6		6	4	4	6	5
Atlantic	56.3	99.9	50.4	68.9	1	32.4	5/17	28	39	82
Dubois	44.7	96.0	48.9	63.2	5	33.5	5/19	4	35	90
Bronco	52.9	103.7	47.0	67.9	3	31.8	5/22	10	37	89
58-30-2	54.2			54.7(a)		33.5(a)	5/21	10	34(a)	92(a)
C.I. 7128	42.2	92.7	47.7	60.9	7	29.3	5/18	25	30	79
C.I. 7129	52.6	92.4	45.9	63.6	4	30.8	5/19	26	38	86
Norline	45.5	79.6	51.2	58.8	8	30.2	5/23	25	34	86
Arlington	46.7	100.4	41.3	62.8	6	32.8	5/18	25	36	78
Forkedeer	59.9	100.8	44.4	68.4	2	32.7	5/20	45	37	95
Lee	50.9	74.6	39.7	55.1	9	33.2	5/21	13	34	80

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)	Spring stand (%)
	Blacksburg	Emory(b)	McCormick(b)	Average	Rank					
1958-59-60										
Number of tests	3	2	2	7		7	5	5	7	6
Atlantic	49.0	99.9	50.4	63.9	3	32.7	5/21	23	38	78
Dubois	44.7	96.0	48.9	60.6	4	34.0	5/22	3	35	88
Bronco	51.5	103.7	47.0	65.1	2	32.1	5/25	9	36	86
Arlington	45.9	100.4	41.3	60.2	5	33.0	5/21	20	36	74
Forkedeer	59.2	100.8	44.4	66.9	1	33.4	5/23	36	36	91
Lee	47.3	74.6	39.7	52.9	6	33.5	5/24	10	34	75

(a) Data from 4 tests only.

(b) Data from 1959-60 only.

Table 10. Performance of fall oat varieties tested in the Piedmont in 1960.

Variety or selection	Yield in bushels per acre: Charlotte Court House	Orange	Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
Number of tests			2		2	2	2	1
Moregrain	92.4	96.4	94.4	1	32.8	5/1	0	33
Suregrain	66.0	83.1	74.6	12	30.3	5/3	1	31
Victorgrain 48-93	61.6	94.2	77.9	9	29.5	5/3	0	37
Fulgrain	55.6	86.2	70.9	15	33.3	5/1	0	31
Atlantic	68.5	97.2	82.9	6	31.3	5/6	1	45
Dubois	56.9	95.0	76.0	11	31.8	5/9	0	38
Bronco [a]	70.4	101.8	86.1	3	32.3	5/13	10	43
58-30-2 [a]	81.1	81.6	81.4	8	33.5	5/10	19	41
58-30-21 [a]	65.2	82.0	73.6	13	31.5 [b]	5/13 [b]	30 [b]	43
Carolee	81.6				29.0 [b]	5/5 [b]	0 [b]	
58-32-24 [a]	70.4	95.2	82.8	7	31.0	5/8	3	40
Woodgrain	59.1	85.2	72.2	14	29.5	5/8	2	33
Earlygrain	45.4	79.3	62.4	16	28.5	4/25	2	31
Fulwood	76.5	93.4	85.0	4	31.0	5/4	0	30
Arlington	75.9	76.0	76.0	11	31.5	5/5	2	42
Forkedeer	81.1	88.4	84.8	5	33.3	5/9	4	42
Lee	87.5	85.0	86.3	2	32.8	5/9	15	42
L.S.D. (.05)	13.6	14.4						

(a) Experimental varieties, not commercially available. See page 38 for parentage.

(b) Data from Charlotte Court House only.

Table 11. Average performance of fall oat varieties tested in the Piedmont in 1959-60.

Variety or selection	Yield in bushels per acre: Charlotte Court House	Orange	Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
Number of tests	2	2	4		4	4	4	3
Moregrain	74.8	60.9	67.9	6	32.7	5/8	4	30
Victorgrain 48-93	51.0	72.1	61.6	7	30.5	5/3	1	34
Atlantic	66.0	84.2	75.1	2	30.9	5/7	15	42
Bronco	64.0	86.1	75.0	3	30.9	5/12	30	39
Fulwood	69.9	84.5	76.7	1	31.8	5/4	2	30
Arlington	73.7	75.6	74.7	4	31.5	5/6	9	42
Lee	74.0	75.2	74.6	5	32.7	5/9	12	38
Data from Charlotte Court House								
Suregrain	46.2				31.2	5/3	4	26
Fulgrain	45.4				33.9	4/29	1	29
Carolee	69.3				30.5	5/3	0	
Woodgrain	62.2				30.7	5/6	3	31
Earlygrain	42.9				28.5	4/21	6	30
Data from Orange								
Forkedeer		83.7			32.2	5/9	12	38
Dubois		83.4			30.9	5/9	46	37

Table 12. Average performance of fall oat varieties tested in the Piedmont in 1958-59-60.

Variety or selection	Yield in bushels per acre: Charlotte Court House	Orange	Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
Number of tests	3	3	6		6	5	6	5
Moregrain	58.7	59.1	58.9	6	32.6	5/9	5	31
Victorgrain 48-93	44.6	66.3	55.5	7	30.8	5/4	1	35
Atlantic	58.2	81.0	69.6	5	31.4	5/9	25	42
Bronco	61.2	97.0	79.1	1	31.4	5/14	36	39
Fulwood	61.5	79.0	69.9	4	32.2	5/5	4	31
Arlington	66.2	79.7	73.0	2	31.7	5/9	21	43
Lee	64.5	78.3	71.4	3	33.0	5/11	23	40

Table 13. Performance of fall oat varieties tested in the Coastal Plain in 1960.

Variety or selection	Yield in bushels per acre				Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
	Painter	Petersburg	Average	Rank				
Number of tests			2		1	2	2	1
Moregrain	81.7	79.9	80.8	6	37.0	5/11	12	36
Suregrain	66.7	64.4	65.6	20	34.0	5/4	23	36
Victorgrain 48-93	83.0	77.3	80.2	7	34.0	5/4	8	44
Fulgrain	64.7	64.9	64.8	21	35.0	5/1	18	38
Atlantic	78.9	67.9	73.4	14	34.0	5/6	14	46
Dubois	68.1	65.6	66.9	19	35.0	5/9	9	40
Bronco	85.8	67.5	76.7	9	35.0	5/14	9	42
58-30-2 (a)	78.3	70.3	74.3	12	37.0	5/12	7	42
58-30-21 (a)	80.3	63.1	71.7	16	35.0	5/14	4	41
Carolee	83.0	63.1	73.1	15	35.0	5/7	4	37
58-32-24 (a)	93.9	70.7	82.3	4	32.0	5/8	23	43
C.I. 7419 (a)	86.4	90.5	88.5	1	34.0	5/3	8	43
C.I. 7220 (a)	80.3	73.3	76.8	8	36.0	5/8	3	48
C.I. 7413 (a)	76.9	73.8	75.4	11	37.0	5/8	1	47
C.I. 7417 (a)	76.9	57.1	67.0	18	34.0	5/8	3	48
Mid-South	85.8	81.5	83.7	2	35.0	5/4	3	43
Woodgrain	73.5	73.3	73.4	14	34.0	5/7	15	37
Earlygrain	58.5	81.4	70.0	17	32.0	4/25	17	39
Fulwood	78.9	85.8	82.4	3	36.0	5/6	12	39
Arlington	85.8	65.4	75.6	10	35.0	5/6	3	46
Lee	80.3	81.3	80.8	6	35.0	5/10	3	41
L.S.D.(.05)	10.9	12.1						

(a) Experimental varieties, not commercially available. See page 38 for parentage.

Table 14. Average performance of fall oat varieties tested in the Coastal Plain in 1959-60.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
	Painter	Petersburg	Warsaw[a]	Average	Rank				
Number of tests	2	2	1	5		3	4	4	3
Moregrain	71.1	70.3	65.4	69.6	2	36.7	4/28	7	34
Suregrain	64.8	55.6	57.6	59.7	10	35.0	5/2	13	33
Victorgrain 48-93	68.4	66.2	65.0	66.8	6	34.5	5/1	5	39
Fulgrain	47.9	53.9	49.9	50.7	12	35.8	4/28	10	34
Atlantic	67.0	61.7	64.8	64.4	9	33.8	5/4	10	45
Bronco	81.6	59.9	63.0	69.2	5	34.4	5/12	8	39
Carolee	81.4	61.4	60.4	69.2	5	34.3	5/5	5	36
Woodgrain	68.2	67.5	75.4	69.3	3	34.3	5/4	8	34
Earlygrain	48.7	65.6	59.8	57.7	11	31.5	4/21	15	37
Fulwood	66.0	76.0	82.5	73.3	1	36.0	5/2	6	35
Arlington	71.1	60.4	66.0	65.8	8	34.5	5/4	3	45
Lee	69.6	70.7	52.6	66.6	7	35.6	5/8	4	39

(a) Warsaw data for 1959 only.

Table 15. Average performance of fall oat varieties tested in the Coastal Plain in 1958-59-60.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (Inches)
	Painter	Petersburg	Warsaw[a]	Average	Rank				
Number of tests	3	3	2	8		5	6	5	5
Moregrain	64.2	69.4	70.6	67.7	3	36.3	5/1	6	33
Suregrain	60.0	62.1	64.1	61.8	9	34.4	5/4	13	32
Victorgrain 48-93	63.5	67.5	71.3	66.9	6	33.7	5/4	5	38
Fulgrain	43.7	53.8	58.6	51.2	10	34.7	5/1	21	34
Atlantic	62.0	67.2	68.1	65.4	8	33.8	5/6	10	43
Bronco	74.6	70.3	74.4	72.9	1	34.4	5/14	6	40
Woodgrain	60.6	66.5	71.8	65.6	7	34.2	5/7	9	33
Fulwood	57.1	71.6	77.6	67.6	4	35.5	5/4	17	34
Arlington	64.9	64.8	73.8	67.1	5	34.1	5/6	4	43
Lee	67.0	71.1	66.6	68.4	2	35.4	5/10	3	40

(a) Data from Warsaw for 1958 and 1959 only.

Table 16. Disease reaction of fall oat varieties tested in 1960.

Variety or selection	Halo blight (%)						Heads of smut per rod row			Seedling reaction to Victoria blight (greenhouse test)
	Blacksburg	Emory	Charlotte Court House	Orange	Petersburg	Warsaw	Blacksburg	Petersburg	Warsaw	
Moregrain			2	2	24	10		0	0	R
Suregrain			T	5	38	23		0	0	R
Victorgrain 48-93			1	2	1	T		0	0	S
Fulgrain			1	2	12	6		0	0	S
Atlantic	4	27	16	2	42	40	0	0	0	I
Dubois	T	1	T	2	T	T	0	0	0	R
Bronco	T	9	6	7	25	26	0	0	0	R
58-30-2	2	6	13	14	16	8	1	1	4	R
58-30-21	3	10	14	46	16	15	13	21	25	R
Carolee			T		T	T		0	0	R
58-32-24			8	8	6	7		0	1	R
C.I. 7128	1	9					0			S
C.I. 7129	T	10					1			S
Norline	T	3					0			S
59-1-20	T					17	3		1	R
C.I. 7419					7	T		0	0	R
C.I. 7220					17	11		5	11	R
C.I. 7413					15	4		4	11	R
C.I. 7417					21	37		2	8	R
Mid-South					3	T		0	1	R
Woodgrain			2	1	8	2		0	0	S
Earlygrain			T	2	9	13		0	0	R
Fulwood			7	7	15	31		0	0	S
Arlington	4	16	4	9	35		0	0	0	S
Forkedeer	3	15	4	11			0			R
Lee	4	12	6	10	23	18	0	0	0	R

Table 17. Performance of midwinter planted oats tested in 1960.

Variety or selection	Yield in bushels per acre: Charlotte Court House	Orange	Petersburg	Average	Rank	Weight per bushel (lbs.)	Lodging (%)	Height (inches)	Date 1/3 headed
Number of tests				3		3	3	3	2
Earlygrain	56.4	52.0	17.1	41.8	7	28.8	21	31	5/15
Suregrain	27.5	73.0	23.4	41.3	8	29.7	2	27	5/19
Moregrain	39.6	73.9	17.9	43.8	6	31.3	1	26	5/19
Andrew	68.5	70.7	19.7	53.0	4	27.8	3	35	5/20
Mo. 0-205	61.3	82.9	25.2	56.5	2	29.0	4	35	5/17
Newton	71.0	82.8	22.3	58.7	1	30.3	1	34	5/17
Clarion	63.0	72.2	24.2	53.1	3	29.5	1	33	5/24
Mid-South	42.5	75.5	21.0	46.3	5	29.3	1	29	5/17
Data from Orange and Petersburg									
Woodgrain		12.7	15.0	13.9		25.0	38	22	5/18
Victorgrain 48-93		41.5	15.3	28.4		27.8	20	25	5/19
Fulgrain		22.1	17.9	20.0		26.3	12	26	5/21
Lee		73.4	24.3	48.9		30.5	12	31	5/22
Fulwood		16.9	15.5	16.2		27.8	19	23	5/22
Arlington		33.8	22.3	28.1		28.5	42	29	5/18
L.S.D. (.05)	9.5	9.8	4.1						

Table 18. Average performance of midwinter planted oats tested in 1958-59-60.

Variety or selection	Yield in bushels per acre						Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (Inches)
	Orange	Painter[a]	Peters-burg	Warsaw[a]	Average	Rank				
Number of tests	3	2	3	2	10		8	8	8	8
Woodgrain	36.1	35.2	29.8	63.8	39.6	9	27.8	5/24	24	25
Victorgrain 48-93	43.2	35.0	34.1	56.3	41.5	7	28.7	5/24	13	28
Fulgrain	32.7	32.6	26.6	58.9	36.1	10	27.9	5/21	11	28
Suregrain	71.5	42.7	35.3	64.5	53.5	1	29.9	5/24	4	27
Moregrain	71.8	37.2	33.0	64.7	51.8	2	31.4	5/23	5	27
Lee	62.8	33.3	34.7	56.7	47.3	5	29.4	5/26	14	33
Fulwood	37.9	37.2	30.4	63.2	40.6	8	29.7	5/24	11	25
Arlington	48.4	35.9	36.6	64.3	45.5	6	30.1	5/24	28	34
Andrew	62.1	41.4	32.3	64.8	49.6	4	28.8	5/24	13	36
Mo. 0-205	67.1	39.4	34.5	62.3	50.8	3	29.6	5/24	5	37

(a) Data from 1958 and 1959 tests only.

Table 19. Performance of spring oat varieties tested in 1960.

Variety or selection	Yield in bushels per acre: West of Blue Ridge: Blacksburg	Emory	McCormick	Average	Piedmont: Charlotte Court House	Orange	Average	All Locations Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (Inches)
Number of tests				3			2	5		5	3	4	5
Beedee (a)	58.5	34.9	68.0	53.8	64.1	65.1	64.6	58.1	8	31.6	6/7	3	34
58-71-5 (a)	60.9	33.3	65.2	53.1	61.9	70.6	66.6	58.4	7	29.1	6/6	3	31
58-71-13 (a)	59.4	39.9	63.6	54.3	61.9	68.3	65.1	58.6	6	28.9	6/6	5	33
Putnam	58.5	32.1	62.7	51.1	67.1	59.4	63.3	56.0	9	29.8	6/2	6	32
Mo. 0-205	55.2	27.6	57.3	46.7	63.0	54.3	58.7	51.5	14	30.1	6/6	1	35
Clarion	56.4	27.8	58.1	47.4	61.9	65.6	63.8	54.0	11	30.9	6/7	5	34
Clintland 60	48.4	25.8	51.2	41.8	59.4	60.6	60.0	49.1	15	29.7	6/7	1	33
58-71-21 (a)	60.3	39.3	67.0	55.5	72.1	71.2	71.7	62.0	2	31.6	6/5	20	34
Newton	64.1	42.4	64.0	56.8	67.9	70.7	69.3	61.8	3	30.0	6/7	2	34
58-71-28 (a)	49.9	35.5	61.1	48.8	60.5	65.1	62.8	54.4	10	32.5	6/6	3	33
Dupree	59.7	39.3	57.7	52.2	70.1	69.8	70.0	59.3	5	28.7	6/5	12	32
Macon	51.6	26.3	61.8	46.6	64.1	59.1	61.6	52.6	13	29.8	6/5	3	35
Orange 7 (a)	64.5	39.3	69.7	57.8	68.5	68.8	68.7	62.2	1	29.1	6/6	4	34
Andrew	52.1	31.1	64.8	49.3	67.1	54.7	60.9	53.9	12	29.2	6/4	7	35
Tonka	64.2	35.4	70.7	56.8	67.9	69.7	68.8	61.6	4	33.0	6/3	1	32
L.S.D. (.05)	4.9	5.1	N.S.D.		7.0	8.7							

(a) Experimental varieties, not commercially available. See page 39 for parentage.

Table 20. Average performance of spring oat varieties tested in 1959-60.

Variety or selection	Yield in bushels per acre: West of Blue Ridge: Blacksburg	West of Blue Ridge: Emory	West of Blue Ridge: McCormick	West of Blue Ridge: Average	Piedmont: Charlotte Court House	Piedmont: Orange	Piedmont: Average	All locations Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (Inches)
Number of tests	2	2	2	6	2	2	4	10		9	5	7	8
Beedee	61.4	48.1	51.4	53.6	49.1	58.1	53.6	53.6	7	32.1	6/4	1	36
Putnam	64.1	61.0	53.7	59.6	50.6	57.7	54.2	57.5	4	30.1	5/28	1	34
Mo. 0-205	59.1	56.3	53.3	56.2	49.8	57.1	53.5	55.1	5	30.0	6/3	1	37
Clarion	55.0	42.7	48.7	48.8	44.0	59.9	52.0	50.4	8	30.9	6/4	1	36
Clintland 60	46.7	43.3	41.4	43.8	43.3	56.3	49.8	46.2	9	29.5	6/4	0	34
Newton	61.7	61.7	53.0	58.8	52.0	62.0	57.0	58.1	3	30.8	6/3	1	36
Dupree	65.7	63.2	54.7	61.2	55.8	61.7	58.8	60.2	1	29.0	5/30	3	34
Orange 7	66.2	59.4	51.8	59.1	53.3	61.0	57.1	58.3	2	29.0	6/2	4	36
Andrew	57.3	52.2	49.5	53.0	52.8	57.4	55.1	53.8	6	29.4	5/30	7	37
Data for 1960 only except for Blacksburg and Orange													
Number of tests	2	1	1	4	1	2	3	7		7	5	6	7
58-71-5	60.1	33.3	65.2	54.7	61.9	63.5	63.0	58.3		29.6	6/2	0	32
58-71-13	62.8	39.9	63.6	57.3	61.9	63.7	63.1	59.8		29.2	6/2	0	34
58-71-21	60.7	39.3	67.0	56.9	72.1	64.5	67.0	61.2		31.7	6/2	11	36
58-71-28	54.0	35.5	61.1	51.2	60.5	59.7	60.0	55.0		32.4	5/28	0	34
Macon	54.5	26.3	61.8	49.3	64.1	60.0	61.4	54.5		30.4	5/27	4	36
Tonka	66.1	35.4	70.7	59.6	67.9	62.9	64.6	61.7		33.1	5/25	0	33

Table 21. Average performance of spring oat varieties tested in 1958-59-60.

Variety or selection	Yield in bushels per acre									Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (Inches)
	West of Blue Ridge				Piedmont			All locations Average	Rank				
	Blacksburg	Emory	McCormick	Average	Charlotte Court House	Orange	Average						
Number of tests	3	3	3	9	3	3	6	15		14	8	12	13
Beedee	57.8	43.0	43.1	47.9	39.4	51.8	45.6	47.0	6	32.4	6/6	7	34
Putnam	60.8	48.7	45.1	51.6	40.5	50.4	45.5	49.2	3	30.4	6/2	1	33
Mo. 0-205	55.9	47.4	45.2	49.5	41.2	50.4	45.8	48.0	5	30.6	6/5	2	35
Clarion	52.5	39.5	42.5	44.8	38.1	53.0	45.6	45.2	7	31.1	6/6	1	35
Clintland 60	46.5	36.8	35.5	39.6	34.1	47.9	41.0	40.2	8	30.1	6/6	0	33
Newton	61.6	50.9	45.4	52.1	42.8	54.6	48.7	51.1	2	31.2	6/5	1	34
Dupree	63.6	54.4	48.5	55.1	47.5	55.3	51.4	53.6	1	29.7	6/3	4	33
Andrew	57.7	43.4	43.6	48.2	44.5	51.3	47.9	48.1	4	30.1	6/2	10	35

Table 22. Performance of wheat varieties tested West of the Blue Ridge in 1960.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (Inches)	Spring stand (%)
	Blacksburg	Emory	McCormick	Average	Rank					
Number of tests				3		3	1	1	2	2
Anderson	23.8	42.4	30.9	32.4	10	57.3	5/28	3	43	83
Taylor 49	35.0	55.5	37.0	42.5	1	57.2	5/27	3	41	92
Pennoll	22.3	31.9	25.8	26.7	17	58.4	5/31	0	42	80
Dual	26.5	42.7	28.1	32.4	10	54.0	5/27	9	39	86
C.I. 13170[(a)]	26.8	41.7	31.7	33.4	6	55.5	5/27	3	39	85
Thorne	31.3	43.7	32.0	35.7	3	56.9	5/30	7	40	87
Seneca	29.6	38.3	36.1	34.7	4	57.7	5/29	0	40	85
Vahart	26.9	38.6	28.9	31.5	13	58.6	5/27	8	43	88
Leapland[(a)]	33.2	35.9	30.1	33.1	8	57.5	5/27	4	40	84
55-39-23[(a)]	21.8	39.3	30.2	30.5	15	56.2	5/28	0	40	85
57-43-1[(a)]	29.6	53.0	32.7	38.4	2	58.9	5/28	3	39	86
55-16-38[(a)]	25.1	38.7	31.1	31.6	12	55.8	5/27	3	39	86
55-16-16[(a)]	22.8	38.8	30.9	30.8	14	55.2	5/28	3	39	85
55-39-30[(a)]	23.5	40.7	31.4	31.9	11	56.1	5/28	3	39	85
58-16-4[(a)]	19.7	39.7	28.3	29.2	16	56.3	5/29	8	38	82
Vermillion	26.2	44.8	28.2	33.1	8	56.7	5/23	4	40	88
Tayland	28.4	39.0	33.4	33.6	5	56.1	5/28	12	42	80
L.S.D. (.05)	3.8	7.4	3.0							

(a) Experimental varieties, not commercially available. See page 39 for parentage.

Table 23. Average performance of wheat varieties tested West of the Blue Ridge in 1959-60.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)	Spring stand (%)
	Blacksburg	Emory	McCormick	Average	Rank					
Number of tests	2	2	2	6		6	3	3	5	3
Anderson	38.9	34.6	31.8	35.1	10	57.4	5/25	2	48	86
Taylor 49	42.5	43.8	36.1	40.8	1	57.9	5/23	4	45	92
Pennoll	35.6	24.9	26.1	28.9	15	58.7	5/28	7	48	83
Dual	37.9	35.8	30.5	34.7	12	55.8	5/24	8	44	88
Seneca	41.1	35.3	33.1	36.6	6	58.4	5/26	0	46	88
Vahart	37.3	30.0	30.1	32.5	14	58.8	5/24	8	47	90
Leapland	44.3	31.8	31.3	35.8	9	58.3	5/24	15	47	87
55-39-23	37.1	32.7	37.8	35.9	8	57.4	5/25	1	45	88
57-43-1	40.4	43.2	35.5	39.7	2	59.0	5/24	7	45	88
55-16-38	38.9	35.2	37.6	37.2	3	57.7	5/24	2	45	88
55-16-16	38.9	33.3	38.2	36.8	5	56.4	5/25	2	46	88
55-39-30	37.2	36.2	37.3	36.9	4	57.6	5/24	2	46	88
58-16-4	37.2	34.4	37.5	36.3	7	57.7	5/26	3	45	86
Vermillion	34.0	41.2	26.9	34.1	13	57.4	5/20	30	44	89
Tayland	38.6	34.9	31.4	35.0	11	57.3	5/25	6	47	84

Table 24. Average performance of wheat varieties tested West of the Blue Ridge in 1958-59-60.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)	Spring stand (%)
	Blacksburg	Emory	McCormick	Average	Rank					
Number of tests	3	3	3	9		9	5	5	8	6
Anderson	40.9	34.0	26.4	33.8	7	57.7	5/26	2	48	89
Taylor 49	40.0	38.0	30.0	36.0	1	57.8	5/25	2	44	82
Pennoll	38.7	25.2	23.6	29.2	11	58.3	5/29	5	48	88
Dual	40.1	36.7	26.2	34.3	5	56.0	5/26	6	43	92
Seneca	40.5	34.7	27.8	34.4	3	58.1	5/27	1	45	91
Vahart	37.8	29.9	25.0	30.9	10	58.8	5/25	6	47	90
Leapland	45.8	30.7	25.8	34.1	6	58.3	5/25	10	47	87
55-39-23	39.2	32.7	30.9	34.3	5	57.6	5/26	2	45	91
55-39-30	39.7	35.5	30.5	35.3	2	57.6	5/25	1	45	92
Vermillion	35.8	38.5	23.0	32.5	9	57.9	5/23	24	43	91
Tayland	39.1	36.1	25.5	33.6	8	57.3	5/26	4	47	88

Table 25. Performance of wheat varieties tested in Piedmont in 1960.

Variety or selection	Yield in bushels per acre: Charlotte Court House	Orange	Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)	Spring stand (%)
Number of tests			2		2	2	2	1	1
Anderson	46.3	39.8	43.1	5	61.0	5/9	6	54	95
Taylor 49	35.9	40.8	38.4	18	60.5	5/10	7	52	97
Pennoll	43.6	38.4	41.0	11	61.0	5/15	6	54	94
Coker 47-27	40.9	39.5	40.2	14	61.0	5/7	10	53	99
Dual	45.2	37.9	41.6	8	60.0	5/12	3	53	94
Atlas 66	37.7	41.2	39.5	16	59.0	5/8	15	50	98
Wakeland	45.3	38.2	41.8	7	59.8	5/4	20	47	96
C.I. 13170(a)	53.1	38.9	46.0	1	61.8	5/11	1	53	96
Thorne	38.0	42.4	40.2	14	60.5	5/12	10	53	93
Seneca	39.5	38.0	38.8	17	61.5	5/13	4	53	97
Vahart	40.6	38.5	39.6	15	61.0	5/9	14	53	96
Leapland(a)	42.1	40.5	41.3	10	60.5	5/9	15	51	97
55-39-23(a)	44.1	38.6	41.4	9	61.0	5/12	3	53	98
57-43-1(a)	42.4	38.5	40.5	12	61.3	5/11	11	53	96
55-16-38(a)	48.1	40.2	44.2	2	60.8	5/12	3	53	95
55-16-16(a)	46.8	39.7	43.3	4	61.0	5/12	1	53	97
55-39-30(a)	47.8	39.4	43.6	3	61.3	5/12	1	53	95
58-16-4(a)	47.1	37.6	42.4	6	61.0	5/13	4	53	94
Vermillion	35.2	38.0	36.6	19	61.0(b)	5/5(b)	4(b)	48(b)	96(b)
Tayland	38.1				60.5	5/10	10	53	93
L.S.D. (.05)	6.5	N.S.D.							

(a) Experimental varieties, not commercially available. See page 39 for parentage.
(b) Data from Charlotte Court House only.

Table 26. Average performance of wheat varieties tested in the Piedmont in 1959-60.

Variety or selection	Yields in bushels per acre: Charlotte Court House	Orange	Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
Number of tests	2	2	4		4	4	3	3
Anderson	40.3	34.7	37.5	7	59.5	5/9	6	52
Taylor 49	35.2	38.7	37.0	9	59.3	5/9	11	49
Pennoll	35.5	36.7	36.1	13	60.5	5/13	5	52
Coker 47-27	37.1	37.6	37.4	8	60.3	5/7	8	50
Dual	35.2	37.5	36.4	11	59.0	5/12	2	49
Atlas 66	34.1	36.0	35.1	14	58.5	5/8	12	48
Seneca	35.2	38.7	36.9	10	60.3	5/12	3	51
Vahart	35.4	35.5	35.0	15	60.5	5/9	11	51
Leapland	36.2	36.4	36.3	12	60.0	5/9	11	50
55-39-23	38.4	38.7	38.6	5	60.0	5/11	2	50
57-43-1	39.8	38.6	39.2	4	60.7	5/10	8	50
55-16-38	40.9	39.3	40.1	1	59.9	5/11	2	49
55-16-16	40.6	39.0	39.8	2	60.0	5/11	1	50
55-39-30	40.0	39.1	39.5	3	60.2	5/11	1	49
58-16-4	39.3	37.2	38.3	6	60.0	5/12	3	49
Vermillion	30.2	38.8(a)	34.5(b)	16	60.5(b)	5/5(b)	15	45
Tayland	34.3	38.6(a)	35.7(b)		59.2(b)	5/10(b)	4	50

(a) Data from 1959 only.
(b) Data from three tests only.

Table 27. Average performance of wheat varieties tested in the Piedmont in 1958-59-60.

Variety or selection	Yield in bushels per acre: Charlotte Court House	Orange	Average	Rank	Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
Number of tests	3	3	6		6	5	5	5
Anderson	38.6	35.3	37.0	6	59.2	5/13	10	50
Taylor 49	35.2	35.5	35.4	10	58.6	5/3	15	47
Pennoll	36.0	38.4	37.2	5	60.0	5/15	10	52
Coker 47-27	39.1	32.6	35.7	9	59.5	5/11	7	48
Dual	35.7	37.9	36.9	7	58.3	5/14	5	47
Atlas 66	34.4	32.4	33.5	13	57.6	5/12	11	45
Seneca	34.8	38.3	36.5	8	59.9	5/14	10	49
Vahart	35.0	35.1	35.1	11	59.9	5/13	11	50
Leapland	36.8	38.2	37.5	4	59.4	5/12	17	49
55-39-23	37.5	38.2	37.9	3	59.3	5/14	7	48
57-43-1	40.8	38.9	39.9	1	60.3	5/13	9	48
55-39-30	38.2	38.8	38.5	2	59.4	5/13	5	48
Vermillion	30.3	38.1(a)	34.2(b)	12	60.0(b)	5/9	16	44
Tayland	35.4	37.8(a)	36.4(b)		58.1(b)	5/13	9	48

(a) Data from 1958-59 only.
(b) Data from five tests only.

Table 28. Performance of wheat varieties tested in the Coastal Plain in 1960.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
	Painter	Petersburg	Warsaw	Average	Rank				
Number of tests				3		2	2	3	2
Anderson	37.0	46.2	17.2	33.5	14	60.3	5/10	12	50
Taylor 49	43.2	42.7	14.8	33.6	12	60.0	5/11	7	43
Pennoll	28.3	38.3	17.2	27.9	20	61.2	5/16	6	48
Coker 47-27	50.1	46.5	15.7	37.4	3	60.1	5/7	11	46
Dual	39.2	41.3	17.3	32.6	17	58.9	5/13	7	42
Atlas 66	45.0	42.3	17.2	34.8	9	58.9	5/8	7	43
Wakeland	49.7	48.0	19.8	39.2	1	58.8	5/1	6	40
C.I. 13170[a]	43.9	45.4	21.4	36.9	4	60.6	5/12	2	44
Thorne	41.0	42.3	17.2	33.5	14	60.4	5/15	5	46
Seneca	42.5	40.5	17.2	33.4	15	61.3	5/13	4	46
Vahart	36.3	39.3	16.3	30.6	19	60.0	5/11	9	47
Leapland[a]	35.6	43.5	17.2	32.1	18	60.3	5/12	17	48
55-39-23[a]	42.1	40.1	22.1	34.8	9	60.7	5/13	5	44
57-43-1[a]	46.8	46.5	19.1	37.5	2	59.9	5/10	5	45
55-16-38[a]	39.9	44.0	19.6	34.5	11	60.8	5/13	4	44
55-16-16[a]	42.1	41.8	19.7	34.5	11	60.0	5/13	5	45
55-39-30[a]	39.2	40.9	19.2	33.1	16	59.7	5/13	5	45
58-16-4[a]	40.7	44.3	19.4	34.8	9	60.0	5/13	5	44
Vermillion	45.0	44.2	16.8	35.4	6	60.0	5/4	11	41
Tayland	43.9	47.3	15.1	35.4	6	59.1	5/10	14	46
L.S.D. (.05)	6.1	4.9	2.8						

(a) Experimental varieties, not commercially available. See page 39 for parentage.

Table 29. Average performance of wheat varieties tested in the Coastal Plain in 1959-60.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
	Painter	Petersburg	Warsaw	Average	Rank				
Number of tests	2	2	2	6		4	4	5	4
Anderson	36.9	37.8	27.9	34.2	14	59.1	5/9	7	51
Taylor 49	45.2	37.2	29.2	37.2	7	58.7	5/9	5	45
Pennoll	33.2	32.2	25.3	30.2	17	59.9	5/15	4	49
Coker 47-27	48.0	39.5	31.5	39.7	2	59.4	5/7	7	48
Dual	41.2	32.0	28.4	34.0	15	57.0	5/12	5	43
Atlas 66	43.9	35.8	30.0	36.6	9	58.0	5/7	5	45
Seneca	41.2	35.2	26.8	34.4	13	59.8	5/12	2	47
Vahart	36.5	33.5	28.2	32.7	16	59.8	5/10	6	48
Leapland	37.6	36.8	29.1	34.5	12	59.5	5/10	11	49
59-39-23	41.5	35.6	33.3	36.8	8	59.3	5/11	3	46
57-43-1	46.5	41.1	33.7	40.5	1	59.0	5/9	3	47
55-16-38	43.4	37.5	33.9	38.3	3	59.3	5/11	2	46
55-16-16	43.0	37.0	33.9	38.0	4	59.0	5/11	3	46
55-39-30	40.6	35.4	32.5	36.2	11	59.0	5/11	3	46
58-16-4	41.3	36.3	34.0	37.2	7	58.8	5/11	3	46
Vermillion	45.2	35.0	28.8	36.4	10	59.3	5/10	9	43
Tayland	45.3	39.0	27.5	37.5	5	58.3	5/10	9	47

Table 30. Average performance of wheat varieties tested in the Coastal Plain in 1958-59-60.

Variety or selection	Yield in bushels per acre					Weight per bushel (lbs.)	Date 1/3 headed	Lodging (%)	Height (inches)
	Painter	Petersburg	Warsaw	Average	Rank				
Number of tests	3	3	3	9		6	6	7	6
Anderson	31.6	37.2	29.1	32.6	12	58.7	5/11	9	50
Taylor 49	37.1	38.2	30.2	35.2	4	58.6	5/12	4	44
Pennoll	29.5	34.3	27.8	30.5	14	59.2	5/16	5	49
Coker 47-27	39.1	38.7	31.3	36.4	2	59.2	5/9	6	48
Dual	36.1	34.1	29.9	33.6	10	56.8	5/14	4	43
Atlas 66	35.7	35.2	30.1	33.7	8	57.5	5/9	6	45
Seneca	35.7	36.8	28.4	33.6	9	59.3	5/14	3	47
Vahart	31.3	34.3	29.4	31.6	13	59.6	5/12	6	48
Leapland	31.9	36.9	31.6	33.5	11	59.1	5/12	11	49
55-39-23	36.3	36.4	32.6	35.1	5	58.5	5/13	3	46
57-43-1	39.2	40.6	32.1	37.3	1	58.6	5/12	3	46
55-39-30	36.0	36.3	32.1	34.8	6	58.5	5/14	3	46
Vermillion	37.7	37.4	28.8	34.7	7	58.9	5/11	7	43
Tayland	38.3	39.9	29.9	36.0	3	58.1	5/12	9	47

Table 31. Disease reaction of wheat varieties tested in 1960.

Variety or selection	Leaf rust (%)		Powdery Mildew (%)			Heads of loose smut per rod row		
	Blacksburg	Emory	Charlotte Court House	Petersburg	Warsaw	Blacksburg	Petersburg	Warsaw
Anderson	5	11	24	8	13	0	0	0
Taylor 49	13	18	55	23	18	0	0	0
Pennoll	30	67	23	15	22	T	0	T
Coker 47-27			27	2	T		0	0
Dual	0	0	47	23	5	1	2	2
Atlas 66			23	5	1		2	T
Wakeland			23	0	0		0	0
C.I. 13170	0	0	17	0	2	T	2	1
Thorne	40	77	38	27	13	T	T	T
Seneca	42	75	37	28	23	8	24	17
Vahart	32	76	30	12	4	2	4	6
Leapland	30	77	33	13	8	8	1	T
55-39-23	0	0	19	0	0	6	27	15
57-43-1	8	27	37	0	5	5	3	10
55-16-38	0	0	16	0	T	6	18	8
55-16-16	0	0	12	0	0	8	16	9
55-39-30	0	T	13	2	T	3	35	17
58-16-4	0	0	20	0	T	T	15	7
Vermillion	11	0	60	53	47	1	1	1
Tayland	32	27	47	20	36	2	2	2

Parentages and sources of experimental varieties
of small grain tested in Virginia in 1960

Variety	Parentage and source
Barley	
Awnletted Hudson	A Virginia selection from Hudson.
Kenbar x Davie, 392	A selection by North Carolina from Kenbar x Davie.
57-39-23	A Virginia selection from Calhoun x Bolivia.
58-39-40	A Virginia selection from Modia x Wong.
58-40-27	A Virginia selection from Modia x Wong.
Wong x Bolivia, G-38	A Virginia selection from Wong x Bolivia.
Calhoun x Bolivia, 954	A North Carolina selection from Calhoun x Bolivia.
Davie x Harbine, 1487	A North Carolina selection from Davie x Harbine.
58-39-30	A Virginia selection from Modia x Wong.
58-40-13	A Virginia selection from Cebada Capa x Wong.
Fall Oats	
58-30-2	A Virginia selection from Lee.
58-30-21	A Virginia selection from Lee.
C.I. 7128	An Oklahoma selection from Cimarron x Traveler.
C.I. 7129	A Kentucky selection from Wintok x Atlantic.
59-1-20	A Virginia selection from Lee.
58-32-24	A Virginia selection from Atlantic x (Forkedeer x S. Fe - Clinton).
C.I. 7419	A Florida selection from Victorgrain which is resistant to Victoria blight.
C.I. 7220	A USDA selection from Arlington x [Wintok x (Cl.^{2} x S. Fe)].

Variety	Parentage and source
Fall Oats Continued	
C.I. 7413	A USDA selection from Arlington x [Wintok x (Cl.^{2} x S. Fe)].
C.I. 7417	A USDA selection from Arlington x [Wintok x (Cl.^{2} x S. Fe)].
Spring Oats	
58-71-5	A Virginia selection from Clinton x (Anthony - Bond - Boone).
58-71-13	A Virginia selection from Landhafer x (Sac - Hajira - Joanette, 4330).
58-71-21	A Virginia selection from (S.H.J., 4567) x A.B.B., 4089-5).
58-71-28	A Virginia selection from Clinton x (A.B.B.).
Orange 7	A Virginia selection from Vanguard x (D-69 x Bond).
Wheat	
C.I. 13170	Recently named Redcoat and released jointly by Indiana, New York and Pennsylvania.
55-39-23	A Virginia selection from (Supresa x Fultz) x Kawvale x (Fultz - Hungarian x Ill. 1 - Wabash) x Trumbull^{3} x (Hope - Hussar).
55-16-38	Same as above .
55-16-16	Same as above.
55-39-30	Same as above.
58-16-4	Same as above.
57-43-1	A Virginia selection from Hardired x Taylor.