Virginia Cooperative Extension

REVISED 2004

Grains and Other Agronomic Crops

PUBLICATION 424-001

SMALL GRAINS IN 2004

The following are the small grain variety recommendations for Virginia in 2004. The recommendations are based on the agronomic performance in barley and wheat variety tests conducted by the Research and Extension Divisions of Virginia Tech in the various agricultural regions of the state.

SMALL GRAIN VARIETIES RECOMMENDED
Arranged in Order of Maturity
*** These lines are not daylength sensitive and should not be planted early in order to avoid potential freeze damage.**

COASTAL PLAIN	PIEDMONT		WEST OF BLUE RIDGE
	South of James River	North of James River	
Hulled Barley Varieties			
Callao	Callao	Callao	Callao
---	---	Nomini	Nomini
Price	Price	Price	Price
Thoroughbred	Thoroughbred	Thoroughbred	Thoroughbred
Soft Red Winter Wheat			
SS 520*	SS 520*	SS 520*	SS 520*
Sisson	Sisson	Sisson	Sisson
Pioneer Brand 26R24	Pioneer Brand 26R24	Pioneer Brand 26R24	Pioneer Brand 26R24
Crawford	Crawford	Crawford	Crawford
USG 3209*	USG 3209*	USG 3209*	USG 3209*
Pioneer Brand 26R58	Pioneer Brand 26R58	Pioneer Brand 26R58	
Tribute	Tribute	Tribute	Tribute
SS 550	SS 550	SS 550	SS 550
McCormick	McCormick	McCormick	McCormick
SS 560	SS 560	SS 560	SS 560

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

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VIRGINIA STATE UNIVERSITY

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COMMERCIAL BARLEY ENTRIES

Virginia Tech and Virginia Crop Improvement Association, 9142 Atlee Station Road, Mechanicsville, VA 23116 – Barsoy, Callao, Doyce, Nomini, Price, Thoroughbred, and Wysor.

COMMERCIAL AND EXPERIMENTAL WHEAT ENTRIES

AgriPro Wheat, PO Box 411, 520 East 1050 South, Brookston, IN 47923 –Crawford.
University of Arkansas, Dept. of Agronomy, 115 Plant Science, Fayetteville, AR 72701 - Pat.
Featherstone Seed Company, 13941 Genito Road, Amelia, VA 23002 - Featherstone 520.
University of Georgia, GA Station, 1109 Experiment Street, Griffin, GA 30223 - GA931233E17.
Hubner Seed Company, Inc., 524 Bermuda Hundred, Chester, VA 23836 – H-84.
JGL Limited, Inc., 3540 South US 231, Greencastle, IN 46135 – Rachel.
University of Maryland, CMREC/Beltsville Facility, 12000 Beaver Dam Road, Laurel, MD 2 0708 – Choptank, MD5-46, MD71-5, MV6-82, MV8-29, MV27-0187.
North Carolina State University, 840 Method Rd, Unit 3, Box 7629, Raleigh, NC 27695-7629 – Neuse, NC99-13022, NC00-15332, and NC00-15389.
Pioneer Hibred International, Inc., Eastern Division, Tipton, IN 47072 - Pioneer Brand 26R24, Pioneer Brand 26R58, Pioneer Brand 26R12, Pioneer Brand 26R15, and Pioneer Brand XW02M.
Renwood Farms, Inc., 17303 Sandy Point Road, Charles City, VA 23030 – Renwood 3706.
Resource Seeds, Inc., 2355 Rice Pike, Union, KY 41091 – RSI 42203, Trical 2115, and Trical 2205 (all triticales).
Royster-Clark, Inc., 70 N. Market St., Mt. Sterling, OH 43143 – Tribute, V9212, and V9412.
Southern States Cooperative, PO Box 26234, Richmond, VA 23260 - SS 520, SS 550, SS 560, SS 8302, SS 8308, and SS 8309.
Syngenta Seeds, Inc., PO Box 1240, Winterville, NC 28590 –Coker 9375, Coker 9184, Coker 9295, Coker 9312, and Coker B970051.
Uni-South Genetics, 2640-C Nolensville Road, Nashville, TN 37211 - USG 3209, USG 3350, USG 3592, and USG 3706.
Virginia Tech and Virginia Crop Improvement Association, 9142 Atlee Station Road, Mechanicsville, VA 23111 – McCormick, Sisson, and all lines prefixed by VA.

Appreciation is expressed to the Virginia Small Grains Check-Off Board, AgriPro Wheat, Featherstone Seed, Hubner Seed Co., Inc., JGL Limited, Inc., Pioneer, A Dupont Company, Renwood Farms, Inc., Resource Seeds, Royster-Clark, Inc., Southern States Cooperative, Syngenta Seeds, UniSouth Genetics,Inc., and the Virginia Crop Improvement Association for their financial support of the Small Grains Variety Testing Program at Virginia Tech.

Conducted and summarized by the following Virginia Tech employees: Dr. Wade Thomason, Extension Agronomist, Grains; Dr. Daniel E. Brann, Extension Agronomist, Grains (retired); Dr. Carl Griffey, Small Grains Breeder; Mr. Harry Behl, Agricultural Supervisor; Ms. Elizabeth Rucker and Mr. Tom Pridgen, Research Associates. Location Supervisors: Mr. Tom Custis (Painter); Mr. Bobby Ashburn (Holland); Mr. Bob Pitman, Mr. Mark Vaughn, Mr. Jason Kenner, and Mr. Charles Sanford (Warsaw); Mr. Ned Jones, Mr. Bill Wilkinson III, and Mr. Bud Wilmouth (Blackstone); Dr. Carl Griffey, Mr. Wynse Brooks, and Mr. Tom Pridgen (Blacksburg); Mr. Chris Lawrence, Mr. Tom Stanley, and Hockman Farms, (Shenandoah Valley); Mr. David Starner and Mr. Denton Dixon (Orange).

INTRODUCTION

The tables included in this publication present results from barley and wheat varietal tests conducted in Virginia during 2002-2004. Yield data are given for individual locations and across locations and years with yield and other performance characteristics averaged over the indicated number of locations. Performance of a given variety often varies widely over locations and years which makes multiple location-year averages a more reliable indication of expected performance than data from a single year or location. All tests conducted during 2002-2004 were grown in seven-inch rows planted at 22 seeds per row foot with the exception of those at Blacksburg and Warsaw which were grown in six-inch rows at 22 seeds per row foot. The plots were trimmed during the winter to 9 feet in length. Details about management practices for barley and wheat are listed for each experimental location.

The Season

The 2003-2004 small grain crop began in the wake of hurricane Isabel with planting of some doublecrop fields delayed due to hurricane damage and heavy rains. Otherwise planting conditions were mostly favorable.

Barley

Virginia producers planted an estimated 50,000 acres of barley in 2003-04 compared with slightly under 75,000 acres in 2002-03. Grain harvest occurred on 60% of planted acres for the 2002-03 crop and an estimated 80 % for the current year. At a projected 70 bushels per acre, yields were slightly above the 62 bushel per acre average of 2002-2003 but below the 10-yr state-wide average of 75 bushels per acre.

Wheat

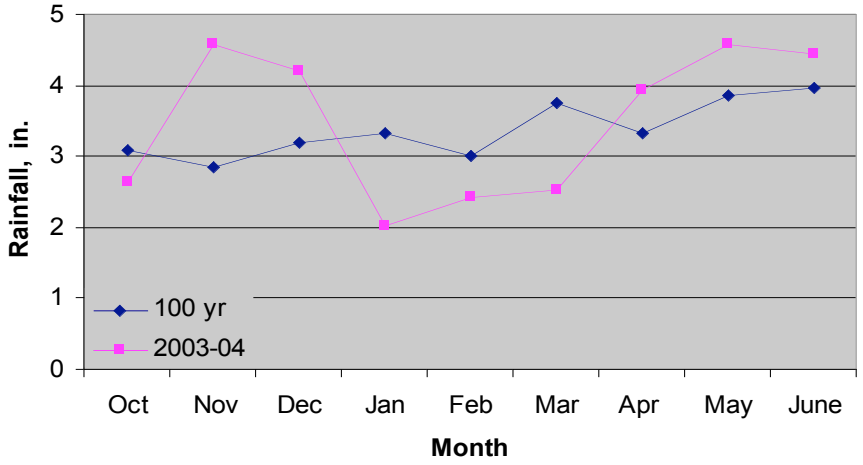
Planted acres for wheat were down from 210,000 acres in 2002-03 to 180,000 acres in 2004. However the percentage harvested for grain this year was slightly over 86%, a ten percent increase from the previous season. Statewide average yield was reported at 63 bushels per acre, up from the dismal performance of 46 bushels per acre in 2002-03 and five bushels per acre better than the 10 year average.

Temperature and Rainfall

Temperatures were warm from October into early November but then much wetter and cooler by the middle of the month. The winter months brought temperatures and precipitation slightly below normal for the state. Late winter evidenced many small grain fields that were stunted or tillering poorly due to late planting, inadequate topsoil moisture, and especially cold temperatures. This same trend was evident into March with small grains developing slowly. Concerns over inadequate moisture were felt statewide but more so in the Southern and Eastern counties as this area was well below normal rainfall. Average daily temperatures in March were also five degrees below normal for the entire state. April ended on a warm and mostly dry note with temperatures above normal. Showers at heading and flowering caused concerns about scab incidence in most of the wheat crop. In many areas of eastern Virginia, high temperatures reached 85° F on more than 15 days of the month. The mostly average yields in 2004 are largely related to the dry, warmer than normal May which shortened the normal grain filling period. Combined with dry conditions, this impeded and shortened the normal grain filling time and the mostly average reported yields in the region reflect this. Barley harvest occurred well ahead of normal due to the dry and hot conditions. Most areas reported good yields, ranging from 60-100 bu/ac. Wheat harvest began mostly ahead of schedule because of the continued dry conditions but was then delayed by rain and cloudy days. Wheat grain quality was affected by the occurrence of scab in many areas but not as severely as the previous season.

Rainfall across the Commonwealth over the 2003-04 growing season and for the previous 100 years is presented in Figure 1. Overall, timely rains were received throughout most of the season with excessive rain received in some areas at harvest time.

Figure 1.



SECTION 1 - BARLEY VARIETIES

Hulless Barley

Hulless barley grows and looks like regular barley until nearly mature. When almost mature, the glumes start to separate from the seed. The grain is separated from the glumes when combined. Grain of hulless barley looks more like wheat than traditional barley.

Yields of current hulless barley lines are generally 10-20 percent lower than those of hulled barley lines. This is expected since the hull makes up 12-15 percent of the weight of traditional barley and the breeding program for hulless barley is relatively new. Rapid progress in this new program at Virginia Tech by Dr. Carl Griffey's small grains breeding group is evident when three-year average yield of hulless check H585 at 71 bushels per acre is compared with those of Doyce at 80 bushels per acre and VA00H-65 at 81 bushels per acre. Test weight of hulless barley is generally in the 56 to 60 pounds per bushel range. Standability of Doyce and most of the hulless barley lines is good. Limited quantities of Doyce will be available to producers for fall 2004 planting.

The impact of hulless barley production in the mid-Atlantic on the animal feeding industries could be significant. Swine feeding trials conducted by Dr. Allen Harper, Virginia Tech Animal Scientist, indicate that the feed value of hulless barley is near that for corn, based on gain, making it a locally grown best-cost ration additive. Work with poultry has also shown favorable results with feed consumption and feed efficiency equal to or greater than corn. Barley may still have a bright future in Virginia and the mid-Atlantic region if we strive to produce what the customer wants. Quality and consistency need to improve to take advantage of market opportunities. Management practices should be optimized so that producers can take advantage of the excellent hulless barley lines being developed at Virginia Tech by Dr. Griffey's "barley team" of Wynse Brooks and Mark Vaughn. We have a great deal to lose if barley becomes obsolete and is no longer a viable crop in our rotation system.

Hulled Barley

Virginia grown barley typically yields in excess of 100 bushels per acre, and fits well in many crop rotation systems. Hulled barley makes good feed for horses, dairy animals, beef, sheep, and some laying hens. The problem is that these industries in Virginia and the mid-Atlantic region use only limited quantities of barley. Profitable barley production on over 50,000 acres in Virginia is going to require revival of international market opportunities and/or development of barley varieties that livestock feeders want to buy.

Newer hulled barley lines performed well with statewide trials with yields of Thoroughbred at 129 bushels per acre and average test weights exceeding 48 pounds per bushel. Thoroughbred has plump, bright, seed and large awns

that break easily at harvest. The 2002 release Price averaged 112 bushels per acre with a test weight of 48.7 pounds per bushel. Two year average yields of the released varieties Thoroughbred, Callao, Nomini, and Price all reached 98 bushels per acre or better. Price, Callao, and Thoroughbred all had two year mean test weight values significantly higher than the test mean. Hopefully these new varieties with improved genetic traits for test weight and other quality factors along with improved agronomic traits will enhance the marketability of Virginia grown barley.

Summary of barley management practices for the 2004 harvest season (All rates are given on a per acre basis.)

Blacksburg - Planted October 8, 2003. Preplant fertilizer was 25-60-100 on October 7, 2003. Site was fertilized with 60-0-0 plus 0.6 oz Harmony Extra® on April 7, 2004. Harvest occurred on June 10, 2004.
Blackstone - Planted October 21, 2003. Preplant fertilizer was 10-10-10 on October 9, 2004. Site was fertilized with 100 lb N using 30%UAN on March 3, 2004. Site was sprayed with 0.5 oz Harmony Extra® on March 4, 2004. Site was sprayed with 2.56 oz Warrior T® on April 27, 2004. Harvest occurred on June 2, 2004.
Painter - Planted November 11, 2003. Preplant fertilizer was 500 lb 5-10-10. Site was fertilized with 120 lb N and 0.5 oz Harmony Extra was applied March 3, 2004. Warrior T® was applied at 2.5 oz May 6, 2004. Harvest occurred on June 22, 2004.
Warsaw - Planted October 16, 2003. Preplant fertilizer was 30-80-100-5 applied October 13, 2003. Site was sprayed with 0.4 oz Finesse® on December 9, 2003. Fertilization at 25 lb N using 15-0-0 was applied December 20, 2003 and again on February 23, 2004. Fertilization at 40 lb N using 24-0-0-3 was applied March 30, 2004. Warrior T® at 2.56 oz was applied May 11, 2004. Harvest occurred June 8, 2004.
Orange - Planted October 10, 2003. Preplant fertilization was 500 lb 5-10-10-3 on October 3, 2003. Sixty lb N and Harmony Extra® at 0.4 oz were applied March 4, 2004. Harvest occurred on June 2, 2004.

Table 1. Summary of performance of hulless entries in the Virginia Tech Barley Test over locations (Blacksburg, Orange, and Warsaw, VA), 2004 harvest.

Hulless Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Net Blotch (0-9)	Leaf Rust (0-9)	
	(3)		(3)		(3)		(3)		(3)		(1)	(1)	
DOYCE	81	+	54.7		23		34	+	0.4		6	1	-
VA01H-68	76	+	56.5	+	22	-	34	+	0.5		5	4	-
VA00H-74	75	+	55.6		23		32		0.4		6	6	+
VA00H-70	75	+	55.4		23		32		0.4		6	4	-
VA00H-89	74		53.5	-	24	+	32		0.3		6	6	+
VA01H-37	74		52.8	-	24	+	32		0.9	+	6	1	-
VA01H-44	74		54.4		24	+	31	-	0.4		5	1	-
VA00H-65	73		55.6		24	+	32		0.3		6	6	+
VA01H-26	73		54.8		24	+	30	-	0.3		5	2	-
VA00H-72	72		55.8		24	+	31	-	0.4		6	5	-
VA01H-13	72		54.9		24	+	33	+	0.5		7	2	-
VA00H-88	71		54.6		24	+	32		0.5		7	6	+
VA00H-97	71		55.2		24	+	32		0.3		7	6	+
VA00H-10	69		53.6	-	24	+	33	+	0.3		6	7	+
VA00H-99	69		55.5		24	+	31	-	0.3		6	6	+
H-585	68		55.0		22	-	34	+	0.3		6	7	+
SC880248	65	-	53.8	-	23		35	+	0.4		6	7	+
VA01H-124	59	-	56.2	+	22	-	27	-	0.3		7	6	+
VA01H-125	58	-	56.4	+	22	-	26	-	0.4		6	6	+
VA01H-122	52	-	55.3		25	+	34	+	0.3		7	2	-
Average	70		55.0		23		32		0.4		6	4	
LSD (0.05)	5		1.1		1		1		0.3		2	2	
C.V.	9		2.4		3		4		109		18	26	

Released cultivars are shown in bold print.

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

The number in parentheses below column headings indicates the number of locations on which data are based.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Belgian Lodging Scale= Area X Intensity X 0.2. Area= 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

Hulless barley is similar to hulled barley except the glumes thrash free of the seed when combined.

Since the hulls make up about 15% of the dry grain weight, yields of hulless barley are expected to be about 15% lower than hulled barley.

Table 2. Two year average summary of performance of hulless entries in the Virginia Tech Barley Tests, 2003 and 2004 harvests.

Hulless Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Net Blotch (0-9)		Leaf Rust (0-9)	
	(7)		(7)		(6)		(6)		(7)		(4)		(2)	
DOYCE	73	+	53.4	-	26	+	34	+	2.1		4		1	-
VA00H-89	72	+	53.8		27	+	34	+	1.1	-	4		6	+
VA00H-65	71		55.3	+	27	+	33		1.5		4		7	+
VA01H-37	71		52.2	-	27	+	32	-	2.8	+	4		1	-
VA01H-13	71		53.7		27	+	34	+	2.2	+	4		1	-
VA01H-26	71		53.7		27	+	31	-	1.8		4		1	-
VA00H-74	70		55.2	+	26	+	33		1.4		4		7	+
VA00H-70	70		54.9		27	+	33		1.4		4		6	+
VA01H-44	70		53.2	-	27	+	31	-	2.1		4		1	-
VA00H-72	69		54.7		27	+	33		1.9		5	+	6	+
VA00H-88	69		54.4		27	+	33		1.5		5	+	6	+
VA00H-97	69		54.9		27	+	33		1.4		4		6	+
VA00H-99	69		55.1	+	27	+	33		1.1	-	4		6	+
SC880248	67		53.9		26	+	36	+	2.3	+	4		7	+
H-585	66	-	54.6		25		35	+	1.8		4		7	+
VA01H-124	64	-	55.2	+	25		28	-	0.8	-	4		6	+
VA00H-10	63	-	53.5	-	27	+	33		1.4		4		7	+
VA01H-122	56	-	55.4	+	28	+	36	+	1.3		5	+	1	-
Average	69		54.3		27		33		1.7		4		4	
LSD (0.05)	3		0.7		1		1		0.5		1		1	
C.V.	9		2.3		3		4		61		20		20	

Released cultivars are shown in bold print.

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

The number in parentheses below column headings indicates the number of location-years on which data are based.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

Hulless barley is similar to hulled barley except the glumes thrash free of the seed when combined. Since the hulls make up about 15% of the dry grain weight, yields of hulless barley are expected to be about 15% lower than hulled barley.

Table 3. Three year average summary of performance of hulless entries in the Virginia Tech Barley Tests, 2002, 2003, and 2004 harvests.

Hulless Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Net Blotch (0-9)	Leaf Rust (0-9)	
	(12)		(11)		(10)		(10)		(10)		(5)	(4)	
VA00H-65	81	+	56.5	+	22		33	-	1.7		5	5	
DOYCE	80	+	54.4	-	23	+	34		2.4	+	5	0	-
VA00H-88	79		55.5		22		33	-	1.7		5	5	
VA00H-74	78		56.2	+	22		33	-	1.7		5	6	+
VA00H-99	78		56.1	+	23	+	33	-	1.4	-	5	5	
VA00H-70	77		55.9		22		33	-	1.9		5	5	
SC880248	73	-	54.7	-	22		36	+	2.5	+	5	6	+
VA00H-10	72	-	54.8	-	23	+	33	-	1.8		5	5	
H-585	71	-	55.1		21	-	35	+	2.1		5	7	+
Average	77		55.5		22		34		1.9		5	5	
LSD (0.05)	3		0.5		1		1		0.4		1	1	
C.V.	9		2.3		4		3		52		16	19	

Released cultivars are shown in bold print.

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

The number in parentheses below column headings indicates the number of location-years on which data are based.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

Hulless barley is similar to hulled barley except the glumes thrash free of the seed when combined. Since the hulls make up about 15% of the dry grain weight, yields of hulless barley are expected to be about 15% lower than hulled barley.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 4. Summary of performance of hulless entries in the Virginia Tech Barley Test, Eastern Virginia AREC, Warsaw, VA, 2004 harvest.

Hulless Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)	
VA01H-68	90	+	57.0		21	-	32	+	1.0	+
DOYCE	82	+	55.5	-	22		29		0.5	
VA01H-37	78		55.3	-	23	+	27		0.8	
VA00H-72	78		56.9		22		28		0.6	
VA00H-74	74		56.9		23	+	29		0.6	
VA01H-13	74		56.3		23	+	29		0.6	
VA00H-65	74		56.8		23	+	28		0.4	
VA01H-26	74		56.2		23	+	26	-	0.4	
VA01H-44	73		55.6	-	23	+	27		0.8	
VA00H-89	73		55.7	-	22		29		0.4	
VA00H-97	72		56.5		23	+	28		0.5	
VA00H-70	71		56.8		23	+	27		0.6	
VA00H-10	70		55.4	-	23	+	29		0.4	
VA00H-88	70		56.4		23	+	27		0.4	
VA00H-99	69		56.9		23	+	28		0.4	
SC880248	68		55.2	-	22		32	+	0.7	
VA01H-124	66		58.2	+	21	-	24	-	0.6	
H-585	64		56.8		21	-	31	+	0.4	
VA01H-125	63	-	58.1	+	21	-	24	-	0.8	
VA01H-122	52	-	57.6	+	23	+	29		0.4	
Average	72		56.5		22		28		0.5	
LSD (0.05)	9		0.7		1		2		0.4	
C.V.	9		0.9		2		5		47	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

Hulless barley is similar to hulled barley except the glumes thrash free of the seed when combined. Since the hulls make up about 15% of the dry grain weight, yields of hulless barley are expected to be about 15% lower than hulled barley.

Table 5. Summary of performance of hulless entries in the Virginia Tech Barley Test, Northern Piedmont AREC, Orange, VA, 2004 harvest.

Hulless Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)
VA00H-97	84	+	54.5		22	+	36		0.2
VA00H-65	83	+	54.7		21		37		0.2
DOYCE	81		53.9		22	+	38	+	0.2
VA01H-44	81		52.4		22	+	36		0.2
VA00H-89	80		51.2	-	21		37		0.2
H-585	79		53.5		21		38	+	0.2
VA00H-70	79		53.7		22	+	36		0.2
VA00H-10	78		52.1		21		37		0.2
VA01H-37	78		50.6	-	22	+	36		0.2
VA00H-88	78		52.1		21		36		0.2
VA00H-74	77		53.9		21		36		0.2
VA00H-99	76		53.8		22	+	36		0.2
VA00H-72	75		55.1		22	+	35		0.2
VA01H-26	73		53.5		22	+	33	-	0.2
SC880248	71		53.9		21		40	+	0.2
VA01H-68	71		57.7	+	20	-	38	+	0.2
VA01H-13	71		53.5		21		37		0.2
VA01H-122	62	-	53.6		21		39	+	0.2
VA01H-124	61	-	55.1		20	-	30	-	0.2
VA01H-125	60	-	55.8		20	-	30	-	0.2
Average	75		53.6		21		36		0.2
LSD (.0.05)	8		2.3		1		2		0.0
C.V.	8		2.7		3		3		0.0

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

Hulless barley is similar to hulled barley except the glumes thrash free of the seed when combined. Since the hulls make up about 15% of the dry grain weight, yields of hulless barley are expected to be about 15% lower than hulled barley.

Table 6. Summary of performance of hulless entries in the Virginia Tech Barley Test, Kentland Farm, Blacksburg, VA, 2004 harvest.

Hulless Lines	Yield (Bu/a)		Test Weight (Lb/bu)	Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Net Blotch (0-9)	Leaf Rust (0-9)	
DOYCE	82	+	54.7	26	-	34	+	0.5		6	1	-
VA00H-70	75	+	55.6	26	-	33	+	0.5		6	4	
VA01H-26	73		54.8	28	+	31		0.2		5	2	-
VA00H-74	72		55.5	26	-	32		0.4		6	6	+
VA01H-13	70		54.5	28	+	32		0.6		7	2	-
VA01H-44	69		54.7	28	+	30		0.2		5	1	-
VA00H-89	68		53.7	28	+	31		0.2		6	6	+
VA01H-68	67		55.2	25	-	32		0.2		5	4	
VA01H-37	67		52.5	27		31		1.6	+	6	1	-
VA00H-88	66		54.6	27		32		0.8		7	6	+
VA00H-72	65		55.2	27		31		0.4		6	5	
H-585	63		54.7	25	-	33	+	0.2		6	7	+
VA00H-99	62		55.5	28	+	31		0.2		6	6	+
VA00H-65	61		55.3	27		31		0.2		6	6	+
VA00H-10	60		53.4	28	+	32		0.2		6	7	+
VA00H-97	58		54.4	28	+	31		0.4		7	6	+
SC880248	56		52.3	26	-	33	+	0.4		6	7	+
VA01H-125	52	-	55.3	25	-	25	-	0.2		6	6	+
VA01H-124	51	-	55.2	25	-	26	-	0.2		7	6	+
VA01H-122	41	-	54.4	29	+	33	+	0.2		7	2	-
Average	64		54.6	27		31		0.4		6	4	
LSD (0.05)	10		2.4	1		2		0.9		2	2	
C.V.	11		3.1	3		4		176		18	26	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Hulless barley is similar to hulled barley except the glumes thrash free of the seed when combined. Since the hulls make up about 15% of the dry grain weight, yields of hulless barley are expected to be about 15% lower than hulled barley.

Table 7. Summary of performance of hulled entries in the Virginia Tech Barley Test over locations (Blacksburg, Orange, and Warsaw, VA), 2004 harvest.

Hulled Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Net Blotch (0-9)		Leaf Rust (0-9)	
	(3)		(3)		(3)		(3)		(3)		(1)		(1)	
THOROUGHBRED	129	+	48.1	+	25	+	33		0.3	-	4		7	+
VA98B-213	125	+	48.3	+	23	+	32	-	0.4	-	6	+	5	+
VA01B-62	125	+	49.7	+	21	-	35	+	2.3	+	6	+	1	-
VA01B-8	123	+	48.1	+	22		29	-	1.9	+	5	+	1	-
CALLAO	122	+	49.0	+	21	-	32	-	2.8	+	4		3	
VA99B-125	117		48.2	+	23	+	32	-	1.7	+	5	+	4	+
VA97B-175	117		48.0	+	22		32	-	0.9		5	+	3	
VA99B-161	116		47.3		22		32	-	0.4	-	5	+	6	+
VA97B-176	114		49.7	+	22		33		1.0		5	+	3	
VA98B-208	113		48.3	+	24	+	28	-	0.2	-	4		4	+
VA01B-26	113		44.0	-	23	+	35	+	0.8		3	-	1	-
PRICE	112		48.7	+	23	+	32	-	0.6		5	+	4	+
VA96-44-304	112		48.3	+	20	-	32	-	1.3		6	+	3	
VA92-42-46	112		45.7	-	23	+	40	+	0.6		7	+	0	-
NOMINI	111		45.5	-	22		40	+	1.4		2	-	4	+
VA99B-327	108		44.4	-	22		35	+	1.2		3	-	6	+
VA01B-87	108		48.4	+	23	+	32	-	0.5		7	+	1	-
VA00B-279	106		44.8	-	21	-	36	+	0.8		2	-	1	-
WYSOR	103	-	45.1	-	24	+	38	+	1.1		4		8	+
VA00B-91	95	-	46.2	-	25	+	31	-	0.3	-	3	-	1	-
VA01B-50	92	-	45.0	-	23	+	32	-	1.2		3	-	4	+
BARSOY	82	-	46.4		20	-	35	+	0.5		4		8	+
Average	112		47.1		22		33		1.0		4		3	
LSD (0.05)	7		0.9		1		1		0.6		1		1	
C.V.	8		2.3		3		4		78		22		31	

Released cultivars are shown in bold print.

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

The number in parentheses below column headings indicates the number of locations on which data are based.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Belgian Lodging Scale=Area X Intensity X 0.2. Area=1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

Table 8. Two year average summary of performance of hulled entries in the Virginia Tech Barley Tests, 2003 and 2004 harvests.

Hulled Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Net Blotch (0-9)		Leaf Rust (0-9)	
	(7)		(7)		(6)		(6)		(7)		(4)		(2)	
THOROUGHBRED	110	+	47.3	+	28	+	35	+	1.3	-	3		6	+
VA98B-213	104	+	47.1	+	26	+	32	-	2.2		3		5	+
VA99B-161	102	+	45.7		25		33	-	3.8	+	3		6	+
VA97B-175	102	+	47.0	+	24	-	32	-	2.3		3		3	-
CALLAO	101		47.4	+	24	-	32	-	4.7	+	3		3	-
VA01B-26	101		44.3	-	25		36	+	1.8	-	3		1	-
VA97B-176	100		48.4	+	25		33	-	2.9		4	+	3	-
VA96-44-304	100		47.0	+	22	-	32	-	2.9		4	+	3	-
NOMINI	99		44.0	-	24	-	41	+	3.0		2	-	5	+
VA99B-125	99		47.5	+	26	+	32	-	3.6	+	3		4	
PRICE	98		46.9	+	26	+	33	-	2.8		4	+	4	
VA98B-208	98		47.0	+	27	+	29	-	1.1	-	3		3	-
VA00B-279	94		44.4	-	22	-	37	+	2.1		2	-	1	-
VA92-42-46	91	-	43.7	-	26	+	40	+	3.3	+	7	+	0	-
WYSOR	85	-	43.7	-	27	+	39	+	3.5	+	3		8	+
BARSOY	84	-	46.3		22	-	36	+	2.3		3		8	+
VA00B-91	84	-	45.7	-	28	+	32	-	1.3	-	3		1	-
Average	97		46.1		25		34		2.6		3		4	
LSD (0.05)	5		0.7		1		1		0.7		1		1	
C.V.	9		2.7		4		4		50		23		26	

Released cultivars are shown in bold print.

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

The number in parentheses below column headings indicates the number of location-years on which data are based.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

Table 9. Three year average summary of performance of hulled entries in the Virginia Tech Barley Tests, 2002, 2003, and 2004 harvests.

Hulled Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Net Blotch (0-9)		Leaf Rust (0-9)	
	(12)		(11)		(10)		(10)		(10)		(5)		(4)	
THOROUGHBRED	114	+	49.6	+	25	+	35	+	1.6	-	3	-	5	+
VA98B-213	107	+	49.1	+	22		32	-	2.5		4		3	
VA99B-161	106		47.4	-	22		32	-	3.2		4		4	+
VA96-44-304	106		48.9	+	19	-	32	-	2.8		5	+	2	-
NOMINI	105		46.3	-	21	-	40	+	3.1		2	-	3	
VA97B-176	105		50.5	+	21	-	33	-	3.3		4		2	-
VA97B-175	105		48.7		20	-	32	-	2.5		3	-	2	-
PRICE	103		48.7		22		33	-	2.9		4		3	
VA99B-125	103		49.3	+	22		32	-	3.7	+	3	-	3	
VA98B-208	102		49.3	+	23	+	29	-	1.4	-	3	-	2	-
CALLAO	101		49.4	+	20	-	31	-	4.6	+	4		2	-
VA92-42-46	95	-	46.1	-	22		40	+	2.9		7	+	0	-
WYSOR	92	-	46.2	-	24	+	39	+	3.7	+	4		5	+
Average	103		48.4		22		34		2.9		4		3	
LSD (0.05)	4		0.5		1		1		0.6		1		1	
C.V.	9		2.5		5		4		44		20		35	

Released cultivars are shown in bold print.

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

The number in parentheses below column headings indicates the number of location-years on which data are based.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 10. Summary of performance of hulled entries in the Virginia Tech Barley Test, Eastern Virginia AREC, Warsaw, VA, 2004 harvest.

Hulled Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)	
THOROUGHBRED	128	+	46.4		23	+	30		0.6	-
VA01B-62	125	+	48.2	+	20	-	31		4.2	+
VA01B-8	123	+	47.5	+	21		25	-	5.0	+
PRICE	117	+	47.8	+	22	+	29		1.3	-
VA97B-175	115		46.9	+	21		29		2.4	
VA98B-213	115		46.6		22	+	28	-	0.7	-
CALLAO	114		48.1	+	21		28	-	5.0	+
VA99B-125	114		47.6	+	21		29		3.6	+
VA97B-176	113		47.8	+	21		30		2.6	
VA96-44-304	112		47.3	+	19	-	30		3.3	+
VA01B-26	112		43.1	-	21		33	+	1.9	
VA98B-208	111		46.7	+	22	+	26	-	0.3	-
VA99B-161	108		45.5		21		29		0.8	-
VA99B-327	107		43.5	-	20	-	34	+	3.2	+
VA92-42-46	100		45.0	-	22	+	36	+	1.4	
VA01B-87	100		47.1	+	21		28	-	1.1	-
VA01B-50	99	-	43.9	-	22	+	31		2.5	
VA00B-91	98	-	45.5		24	+	27	-	0.6	-
VA00B-279	96	-	42.9	-	20	-	35	+	1.9	
NOMINI	95	-	44.6	-	21		37	+	2.9	
WYSOR	95	-	43.8	-	24	+	35	+	2.6	
BARSOY	86	-	45.9		19	-	32	+	1.2	-
Average	108		46.0		21		30		2.2	
LSD (0.05)	9		0.7		1		2		0.9	
C.V.	6		1.0		2		4		30	

Released cultivars are shown in bold print.
Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

Table 11. Summary of performance of hulled entries in the Virginia Tech Barley Test, Northern Piedmont AREC, Orange, VA, 2004 harvest.

Hulled Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)	
VA98B-213	135	+	47.9		21		35	-	0.2	
VA01B-8	133	+	46.4		21		33	-	0.2	
CALLAO	132	+	46.7		20	-	37		2.4	+
THOROUGHBRED	129		46.1		23	+	37		0.2	
VA99B-125	128		46.9		21		37		0.2	
VA99B-161	127		47.4		21		35	-	0.2	
VA01B-62	126		49.3	+	19	-	40	+	1.4	
VA97B-175	126		47.3		21		36		0.2	
VA92-42-46	124		44.5		21		45	+	0.2	
VA97B-176	122		49.5	+	20	-	38		0.2	
VA01B-87	121		48.0		21		37		0.2	
NOMINI	119		45.7		21		43	+	1.2	
VA96-44-304	116		47.8		19	-	35	-	0.2	
VA98B-208	115		48.8		22	+	30	-	0.2	
PRICE	111		49.0		22	+	34	-	0.2	
WYSOR	109		45.0		22	+	43	+	0.5	
VA00B-279	106		44.2		19	-	39	+	0.2	
VA01B-26	106		40.8	-	21		38		0.2	
VA99B-327	105		43.6		20	-	38		0.2	
VA00B-91	105		44.8		22	+	36		0.2	
VA01B-50	84	-	43.4	-	22	+	35	-	0.2	
BARSOY	78	-	45.2		19	-	39	+	0.2	
Average	116		46.3		21		37		0.4	
LSD (.0.05)	14		2.8		1		2		1.6	
C.V.	9		3.8		3		3		270	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

Table 12. Summary of performance of hulled entries in the Virginia Tech Barley Test, Kentland Farm, Blacksburg, VA, 2004 harvest.

Hulled Lines	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Net Blotch (0-9)		Leaf Rust (0-9)	
THOROUGHBRED	128	+	51.7	+	29	+	33		0.2		4		7	+
VA98B-213	125	+	50.3		26	+	33		0.2		6	+	5	+
VA01B-62	124	+	51.5	+	23	-	34		1.5	+	6	+	1	-
NOMINI	120		46.2	-	25		40	+	0.2		2	-	4	+
CALLAO	120		51.7	+	24	-	32		1.1	+	4		3	
VA01B-26	120		47.4	-	26	+	34		0.2		3	-	1	-
VA98B-208	115		49.6		28	+	29	-	0.2		4		4	+
VA00B-279	115		47.1	-	23	-	35	+	0.2		2	-	1	-
VA99B-161	113		49.0		25		31	-	0.2		5	+	6	+
VA99B-327	113		46.2	-	25		34		0.2		3	-	6	+
VA01B-8	112		49.9		25		29	-	0.4		5	+	1	-
VA97B-175	111		50.0		25		31	-	0.2		5	+	3	
VA92-42-46	111		47.4	-	26	+	39	+	0.2		7	+	0	-
VA96-44-304	110		49.8		23	-	30	-	0.5		6	+	3	
VA99B-125	108		49.7		26	+	32		1.2	+	5	+	4	+
PRICE	108		49.5		27	+	32		0.2		5	+	4	+
VA97B-176	108		51.7	+	25		31	-	0.2		5	+	3	
WYSOR	106		46.4	-	27	+	37	+	0.2		4		8	+
VA01B-87	105		50.1	+	26	+	32		0.2		7	+	1	-
VA01B-50	94	-	47.3	-	26	+	30	-	0.8		3	-	4	+
BARSOY	83	-	48.0		22	-	35	+	0.2		4		8	+
VA00B-91	83	-	47.9	-	30	+	30	-	0.2		3	-	1	-
Average	111		49.0		25		33		0.4		4		3	
LSD (0.05)	13		1.1		1		2		0.6		1		1	
C.V.	8		1.6		3		5		114		22		31	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is barley unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is barley standing upright and 5 is barley totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

SECTION 2 - WHEAT VARIETIES

When evaluating wheat variety performance as presented in this report, one should consider the use of seed treatment. Certain entries in this test have different seed treatments that may greatly impact performance. Seed treatments are indicated by an acronym in parentheses following the name. For example, USG3209 (RT) indicates that this entry was treated with raxil and thiram. "B" is Baytan®, "D" is Dividend®, "R" is raxil, and "T" is thiram. Virginia Tech experimental lines and some of the public varieties such as Massey were treated with raxil and thiram.

Selecting the best wheat varieties is challenging but becomes easier with adequate information of performance over multiple environments. Past seasons across Virginia have provided the opportunity to evaluate daylength sensitivity, spring freeze damage, glume blotch, scab (Fusarium head blight), and general plant health. Many newer wheat varieties and lines performed well in all environments tested.

The future for wheat varieties adapted to Virginia conditions is very positive. Dr. Carl Griffey, Virginia Tech's small grains breeder, has many lines starting with "VA" shown in the by-location tables that are in the top-yielding group and that display good disease resistance. He is developing varieties for accessing specialty markets such as white-seeded lines including VA97W-375WS. They are also conducting a massive effort to introduce scab resistance into adapted lines as well as developing adapted varieties that can successfully be used for making bread.

The top-yielding released varieties in 2004 were USG 3209 treated with Raxil and Thiram, and two Virginia releases that are as yet unnamed, VA99W-176 and VA97W-24. These varieties excelled in all geographic regions of the Commonwealth in 2004. It should be noted that disease pressure, especially from powdery mildew, was slight in the 2003-04 growing season. Test weights for these and most other varieties were less than desirable, mainly due to warmer than optimum temperatures during grain filling resulting in lower than expected yields and test weights. USG 3209 is a relatively early wheat that is shorter than average with below average test weight and good standability. VA99W-176 also had test weight significantly below average this season. It is a moderately tall, early wheat with good standability and resistance to powdery mildew. VA97W-24 has average test weight, is later heading than most varieties in the test and is also tall in height (Table 13). In forage trials conducted at NPAREC in Orange, VA during the past two years, VA97W-24 has produced high forage yields in addition to high grain yields.

Tribute, VA99W-176, and VA97W-24 all have statewide average yields above 75 bushels per acre over the past three years (Table 15). Among the varieties having three year average yields significantly higher than the mean, only Tribute and McCormick have test weights that are also significantly better. Other varieties with above average two year mean yields are SS 520 (R) and USG 3209 (RT). These varieties have been available for several years and the high yield of these two varieties is also indicative of the fact that Virginia has not had a major late spring freeze during the past two years. These two varieties tend to initiate reproductive growth early in the year if conditions are warm enough, increasing the likelihood of spring freeze damage. Refer to tables 13-15 for more information on yield, test weight, maturity, height, lodging, and disease ratings for released varieties.

Released varieties producing average statewide yields over the past two seasons include Sisson, Crawford, VA97W-375WS, SS 560, Pioneer 26R24, SS 550, Pioneer 26R58, McCormick, GA931233E17, Choptank, Featherstone 520, Vigoro 9212, Renwood 3706, and Coker 9375. Some of these varieties performed very well at one or more test locations so refer to specific location yields listed in Tables 16-22.

Released varieties yielding less than average over the past two seasons include Coker 9184, USG 3650 (RT), Coker 9295, Neuse, and Massey.

Summary of wheat management practices for the 2004 harvest season (All rates are given on a per acre basis.)

Blacksburg - Planted October 9, 2003. Preplant fertilizer was 25-60-100 applied October 7, 2003. Harmony Extra® was applied at 0.6 oz on April 7, 2004 with 60-0-0. Harvest occurred on June 22, 2004.
Warsaw - Planted October 19, 2003. Preplant fertilizer was 30-60-60-5 applied October 17, 2003. Site received 0.4 oz Finesse® December 9, 2003 and 25 lb 15-0-0 December 21, 2003. Site was fertilized with 25 lb 15-0-0 on February 17, 2004 and with 60 lb 24-0-0-3 on March 30, 2004. Fungicide plots received 4 oz Tilt® May 6, 2004. Warrior T® was applied at 2.56 oz on May 11, 2004. Harvest occurred June 14, 2004.
Blackstone - Planted October 21, 2003. Preplant fertilizer was 10-10-10 on October 9, 2004. Site was fertilized with 100 lb N using 30%UAN on March 3, 2004. Site was sprayed with 0.5 oz Harmony Extra® on March 4, 2004. Site was sprayed with 2.56 oz Warrior T® on April 27, 2004. Harvest occurred on June 10, 2004.
Painter - Planted November 11, 2003. Preplant fertilizer was 500 lb 5-10-10. Site was fertilized with 120 lb N and 0.5 oz Harmony Extra® was applied March 3, 2004. Warrior T® was applied at 2.5 oz May 6, 2004. Fungicide plots received 4 oz Tilt® on May 6, 2004. Harvest occurred on June 22, 2004.
Holland - Planted November 10, 2003. Area received 1 Ton lime and 400 lb 8-16-32 on November 4, 2003. Site was fertilized with 60 units N on February 24, 2004 and again on March 9, 2004. Warrior T® at 2 oz was applied April 30, 2004. Harvest occurred June 9, 2004.
Orange - Planted October 10, 2003. Preplant fertilizer was 500 lb 5-10-10-3 applied October 3, 2003. Sixty units N with Harmony Extra® at 0.4 oz were applied March 4, 2004. Harvest occurred on June 15 (reps 1 and 2) and June 20 (reps 3 and 4), 2004.

Shenandoah Valley - Planted October 9, 2003. Preplant fertilizer was 25-40-60 plus lime as soil test indicated. Thirty lb N and 0.5 oz Harmony Extra® were applied December 3, 2003. Eighty lb N and 0.5 oz Harmony Extra® were applied March 4, 2004. Harvest occurred June 30, 2004.

Table 13. Summary of performance of released varieties in the Virginia Tech Wheat Tests, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)	
	(7)		(7)		(3)		(3)		(3)		(1)		(1)		(3)		(1)	
USG 3209(RT)	78	+	56.9	-	32		32	-	1.4		1		4	+	1	-	0	
VA99W-176	74	+	56.6	-	31		36	+	1.2		1		3	+	2		0	
VA97W-24	74	+	57.2		34	+	37	+	1.2		1		2		2		0	
USG 3706(RT)	72	+	57.2		32		33	-	1.4		1		2		2		0	
SS 8308(R)	72	+	58.0	+	32		35		0.4		1		3	+	1	-	0	
V9412(D)	71	+	58.3	+	32		35		0.4		2	+	4	+	2		0	
USG 3592(RT)	71	+	57.3		33	+	38	+	3.1	+	1		1	-	1	-	0	
CRAWFORD	70	+	57.2		31		35		1.4		1		1	-	2		0	
PIONEER 26R24(D)	70	+	56.9	-	31		36	+	1.9		2	+	2		1	-	0	
PIONEER 26R15(D)	70	+	55.8	-	33	+	35		0.7		2	+	1	-	1	-	0	
PIONEER 26R58(D)	69		55.6	-	32		33	-	0.7		2	+	3	+	3	+	0	
SS 8302(R)	69		57.7	+	34	+	36	+	0.2		2	+	2		2		0	
SS 560(R)	69		57.1		33	+	34	-	1.4		1		2		1	-	0	
RENWOOD 3260	69		58.3	+	32		36	+	1.1		1		1	-	1	-	0	
SISSON	68		56.9	-	31		33	-	1.2		1		6	+	2		0	
SS 550(B)	68		56.8	-	32		34	-	0.9		1		5	+	2		0	
COKER 9312(D)	68		57.7	+	31		33	-	1.9		2	+	1	-	2		0	
PIONEER 26R12(D)	68		58.5	+	33	+	34	-	1.3		2	+	1	-	2		0	
TRIBUTE	68		59.0	+	32		32	-	0.5		2	+	0	-	2		0	
GA931233E17(D)	67		57.8	+	33	+	37	+	3.9	+	2	+	2		2		0	
McCORMICK	67		58.3	+	32		33	-	1.9		1		1	-	1	-	0	
COKER 9184(D)	66		59.3	+	34	+	34	-	0.2		2	+	1	-	2		0	
VA97W-375WS	66		56.2	-	32		31	-	0.6		1		1	-	2		0	
COKER 9375	65		55.3	-	34	+	38	+	1.5		1		3	+	2		0	
FEATHERSTONE 520(RT)	65		57.9	+	32		35		1.3		1		3	+	2		0	
SS 8309(R)	65		56.9	-	33	+	36	+	0.3		1		2		2		0	
RACHEL	64	-	56.5	-	31		34	-	0.3		1		5	+	3	+	1	+
SS 520(R)	64	-	55.9	-	31		35		1.6		2	+	2		2		0	
USG 3650(RT)	64	-	56.8	-	33	+	36	+	0.4		2	+	1	-	2		0	
COKER 9295(D)	63	-	56.0	-	34	+	35		0.6		1		0	-	2		1	
H-84(D)	63	-	57.2		32		35		1.1		3	+	3	+	2		0	
PAT(R)	63	-	57.6	+	37	+	36	+	0.2		2	+	3	+	2		0	
CHOPTANK	63	-	56.9	-	32		31	-	0.3		1		1	-	2		0	
V9212(D)	62	-	56.1	-	32		37	+	0.9		1		3	+	2		1	+
RENWOOD 3706	62	-	56.8	-	32		32	-	0.4		2	+	2		3	+	0	
MASSEY	62	-	57.3		33	+	41	+	2.7	+	1		8	+	2		0	
NEUSE(R)	62	-	59.1	+	34	+	35		1.2		1		0	-	2		0	

Table 13, continued. Summary of performance of released varieties in the Virginia Tech Wheat Tests, 2004 harvest.

Line	Yield (Bu/a)	Test Weight (Lb/bu)	Date Headed (Mar31+)	Height (In)	Lodging (0.2-10)	Powdery Mildew (0-9)	Leaf Rust (0-9)	Barley Yellow Dwarf Virus (0-9)	Wheat Spindle Streak Virus (0-9)
Average	67	57.2	33	35	1.1	1	2	2	0
LSD (0.05)	3	0.3	0	1	1.0	1	1	1	0
C.V.	9	1.1	2	4	114	42	41	43	501

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average.

The number in parentheses below column headings indicates the number of locations on which data are based.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 14. Two year average summary of performance of released varieties in the Virginia Tech Wheat Tests, 2003 and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)		Glume Blotch (0-9)	
	(12)		(12)		(6)		(6)		(6)		(5)		(3)		(3)		(1)		(2)	
VA99W-176	73	+	56.1		34		37	+	1.6		0	-	2	-	2		0	-	2	
VA97W-24	72	+	56.1		37	+	39	+	1.9		2	+	3		2		0	-	2	
USG 3209(RT)	70	+	55.4	-	35		34	-	1.7		1		5	+	1	-	0	-	3	+
SS 520(R)	69	+	56.0		34		37	+	1.4		1		2	-	2		0	-	1	-
TRIBUTE	69	+	58.4	+	35		34	-	1.0		0	-	1	-	2		0	-	1	-
SISSON	68		56.4		34		34	-	1.7		1		6	+	2		0	-	2	
CRAWFORD	68		56.6		34		36		1.5		1		0	-	2		0	-	2	
VA97W-375WS	68		55.9	-	35		33	-	1.0		0	-	0	-	2		0	-	2	
SS 560(R)	68		55.9	-	36		34	-	0.9		1		4	+	1	-	0	-	2	
PIONEER 26R24(D)	68		55.8	-	34		37	+	1.8		1		2	-	1	-	0	-	2	
SS 550(B)	68		55.9	-	35		35	-	1.6		1		5	+	2		0	-	1	-
PIONEER 26R58(D)	67		54.9	-	35		34	-	0.4	-	2	+	4	+	3	+	0	-	4	+
McCORMICK	67		57.9	+	35		33	-	1.1		0	-	0	-	1	-	0	-	1	-
GA931233E17(D)	66		56.9	+	35		38	+	3.4	+	1		1	-	2		0	-	2	
CHOPTANK	66		56.5		34		32	-	0.5	-	0	-	1	-	2		0	-	2	
FEATHERSTONE 520(RT)	65		56.9	+	35		36		2.3	+	2	+	4	+	2		0	-	2	
V9212(D)	64		55.7	-	34		39	+	1.2		3	+	3		2		1	+	3	+
RENWOOD 3706	64		56.4		35		33	-	0.5	-	1		1	-	3	+	0	-	3	+
COKER 9375	64		54.5	-	36		39	+	1.8		2	+	5	+	2		0	-	1	-
COKER 9184(D)	63	-	58.0	+	37	+	34	-	0.3	-	2	+	1	-	2		0	-	2	
USG 3650(RT)	62	-	55.6	-	35		37	+	0.5	-	2	+	1	-	2		0	-	3	+
COKER 9295(D)	61	-	54.8	-	35		36		0.8		2	+	0	-	2		1	+	2	
NEUSE(R)	60	-	58.4	+	37	+	35	-	1.7		0	-	0	-	2		0	-	2	
MASSEY	59	-	56.3		36		41	+	3.3	+	2	+	8	+	2		0	-	2	
Average	66		56.3		35		36		1.4		1		3		2		0		2	
LSD (0.05)	3		0.4		2		1		0.7		0.5		1		1		0.4		1	
C.V.	9		1.7		8		3		86		52		37		43		479		33	

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately. The number in parentheses below column headings indicates the number of location-years on which data are based.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 15. Three year average summary of performance of released varieties in the Virginia Tech Wheat Tests, 2002, 2003, and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)		Glume Blotch (0-9)		Early Height (In)	
	(18)		(18)		(10)		(9)		(9)		(8)		(5)		(5)		(1)		(2)		(1)	
VA97W-24	77	+	56.7	-	33	+	38	+	1.4		2	+	3	+	2		0	-	2		6.7	
VA99W-176	75	+	56.3	-	30	-	36	+	1.5		0	-	3	+	2		0	-	2		6.8	
TRIBUTE	75	+	59.1	+	31		33	-	0.9		0	-	0	-	2		0	-	1	-	5.0	-
SS 520(R)	74	+	56.4	-	30	-	36	+	1.3		1		3	+	2		0	-	1	-	8.7	+
USG 3209(RT)	74	+	56.0	-	31		33	-	1.8	+	1		5	+	2		0	-	3	+	8.0	
SISSON	74	+	56.9		30	-	33	-	1.6		1		5	+	2		0	-	2		7.3	
SS 550(R)	74	+	56.5	-	31		35		1.5		1		4	+	2		0	-	1	-	7.0	
VA97W-375WS	74	+	56.5	-	31		32	-	0.8		0	-	0	-	2		0	-	2		6.5	
McCORMICK	74	+	58.5	+	31		33	-	0.9		0	-	0	-	2		0	-	1	-	5.5	-
SS 560(R)	73	+	56.7	-	33	+	34	-	0.7	-	2	+	3	+	2		0	-	2		6.0	
CHOPTANK	72		57.0		31		31	-	0.4	-	0	-	1	-	2		0	-	2		7.5	
PIONEER 26R24(B)	72		56.6	-	31		36	+	1.5		1		3	+	1	-	0	-	2		6.3	
RENWOOD 3706	70		57.2		31		33	-	0.4	-	1		1	-	3	+	0	-	3	+	5.5	-
FEATHERSTONE 520(RT)	68	-	57.5	+	32	+	35		2.0	+	2	+	3	+	2		0	-	2		8.7	+
USG 3650 (RT)	68	-	56.4	-	32	+	36	+	0.7	-	2	+	1	-	2		0	-	3	+	6.7	
COKER 9184(D)	67	-	58.4	+	34	+	34	-	0.4	-	2	+	1	-	3	+	0	-	2		6.2	
NEUSE(R)	66	-	58.5	+	34	+	35		1.3		0	-	0	-	2		0	-	2		6.0	
COKER 9295(D)	65	-	55.4	-	32	+	36	+	0.7	-	2	+	0	-	3	+	1		2		9.0	+
MASSEY	61	-	56.5	-	32	+	40	+	3.2	+	2	+	7	+	2		0	-	2		8.7	+
Average	71		57.0		31		35		1.2		1		2		2		0		2		6.9	
LSD (0.05)	2		0.3		1		1		0.5		0.4		1		1		0.3		1		1.4	
C.V.	9		1.7		8		3		92		59		41		41		616		33		11.8	

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

The number in parentheses below column headings indicates the number of location-years on which data are based.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 16. Summary of performance of entries in the Virginia Tech Wheat Test, Eastern Shore AREC, Painter, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Powdery Mildew (0-9)	
PIONEER 26R24(D)	68	+	56.3		2	+
PIONEER 26R15(D)	66	+	55.0	-	2	+
VA02W-519	65	+	56.0		1	
VA01W-21	65	+	57.0		1	
VA99W-28	64		54.1	-	1	
VA01W-310	64		57.8	+	2	+
USG 3209(RT)	64		56.7		1	
SS 8308(R)	64		55.7		1	
PIONEER 26R58(D)	64		54.8	-	2	+
VA01W-353	63		54.3	-	1	
TRIBUTE	63		58.0	+	2	+
VA98W-631	62		53.6	-	2	+
VA97W-24	62		56.7		1	
VA02W-553	62		57.3	+	1	
VA02W-124	62		56.7		1	
VA01W-205	62		55.9		2	+
VA01W-148	62		56.4		1	
VA00W-286	62		56.1		1	
PIONEER XW02M(D)	62		55.9		1	
NC00-15389(R)	62		57.3	+	1	
MV8-29	62		57.2	+	1	
McCORMICK	62		56.2		1	
GA931233E17(D)	62		57.3	+	2	+
CRAWFORD	62		55.3	-	1	
VAN98W-342	61		55.5	-	1	
VA98W-627RS	61		55.8		1	
VA02W-683	61		55.2	-	1	
VA02W-555	61		55.8		1	
VA01W-145	61		56.8		1	
VA01W-112	61		56.1		1	
USG 3706(RT)	61		56.1		1	
SS 8309(R)	61		55.3	-	1	
VAN98W-170WS	60		56.4		1	
VA98W-335	60		55.9		1	
VA97W-375RS	60		56.1		1	
VA02W-398	60		55.0	-	1	
V9412(D)	60		57.4	+	2	+
USG 3650(RT)	60		56.5		2	+
MV5-46	60		56.6		1	
MD71-5	60		55.0	-	1	
COKER 9312(D)	60		56.7		2	+
COKER 9295(D)	60		55.7		1	
CHOPTANK	60		56.5		1	
VA99W-176	59		56.1		1	

Table 16, continued. Summary of performance of entries in the Virginia Tech Wheat Test, Eastern Shore AREC, Painter, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Powdery Mildew (0-9)	
VA97W-375WS	59		55.4	-	1	
VA02W-370	59		55.5	-	1	
VA01W-99	59		57.2	+	1	
VA00W-526	59		57.5	+	1	
SS 8302(R)	59		57.1	+	2	+
RACHEL	59		56.4		1	
NC99-13022(R)	59		57.2	+	1	
MV27-0187	59		55.8		1	
COKER 9184(D)	59		59.0	+	2	+
VA02W-267	58		55.2	-	1	
VA01W-18	58		56.8		1	
SS 560(R)	58		56.8		1	
RENWOOD 3260	58		58.1	+	1	
PIONEER 26R12(D)	58		57.5	+	2	+
NEUSE(R)	58		58.8	+	1	
COKER B970051(D)	58		55.1	-	1	
VA98W-627WS	57		54.7	-	1	
VA02W-596	57		55.1	-	1	
VA02W-567	57		57.3	+	1	
USG 3592(RT)	57		56.6		1	
FEATHERSTONE 520(RT)	57		57.5	+	1	
VA02W-513	56		57.5	+	1	
V9212(D)	56		55.0	-	1	
RENWOOD 3706	56		55.6		2	+
COKER 9375	56		54.2	-	1	
VA01W-154	55		57.6	+	1	
VA00W-38	55		55.4	-	1	
VA00W-366	55		56.0		2	+
NC00-15332(R)	54		56.6		1	
SS 520(R)	53	-	53.9	-	2	+
PAT(R)	53	-	57.5	+	2	+
MASSEY	53	-	57.9	+	1	
MV6-82	52	-	56.8		1	
SISSON	51	-	55.9		1	
SS 550(B)	50	-	55.5	-	1	
H-84(D)	50	-	56.0		3	+
Average	59		56.3		1	
LSD (0.05)	6		0.8		1	
C.V.	6		0.8		39	

Released cultivars are shown in bold print.
Varieties are ordered by descending yield averages.
A plus or minus sign indicates a performance significantly above or below the test average.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible. There was no lodging at this location.

Table 17. Summary of performance of entries in the Virginia Tech Wheat Test, Eastern Virginia AREC, Warsaw, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)	
VA97W-24	89	+	56.6		29	+	34	+	3		0	
VA99W-176	85	+	56.0	-	26	-	32		3		0	
USG 3209(RT)	84	+	55.8	-	27		30	-	1		0	
USG 3592(RT)	84	+	57.3	+	29	+	35	+	1		0	
USG 3706(RT)	83	+	57.1	+	28	+	30	-	2	-	0	
PIONEER 26R15(D)	83	+	54.6	-	28	+	33		2	-	0	
SS 560(R)	83	+	57.3	+	29	+	32		2	-	0	
VAN98W-342	81		55.1	-	27		29	-	3		0	
VA00W-38	81		54.8	-	27		32		1		0	
VA01W-21	81		57.4	+	26	-	31		2	-	0	
SS 8302(R)	80		56.9		29	+	33		2	-	0	
SISSON	80		56.7		26	-	31		3		0	
SS 8308(R)	79		57.0	+	27		32		2	-	0	
SS 550(B)	79		56.2		27		33		3		0	
VA97W-375RS	79		56.8		26	-	30	-	4	+	0	
McCORMICK	79		57.4	+	27		32		2	-	0	
VA02W-555	79		55.6	-	27		30	-	2	-	0	
PIONEER 26R58(D)	78		54.7	-	27		31		3		0	
VA02W-124	78		56.5		28	+	34	+	1		0	
COKER 9312(D)	77		57.3	+	26	-	32		3		0	
PIONEER 26R24(D)	77		56.3		26	-	34	+	2	-	0	
TRIBUTE	77		57.9	+	27		30	-	3		0	
VA00W-366	77		56.7		26	-	30	-	2	-	0	
VA02W-683	77		54.5	-	26	-	31		2	-	0	
VA99W-28	76		55.5	-	29	+	32		2	-	0	
VA02W-553	76		56.9		26	-	34	+	3		1	+
CHOPTANK	75		56.7		26	-	29	-	3		0	
VA01W-112	75		55.5	-	27		30	-	1		0	
PIONEER XW02M(D)	75		56.4		26	-	30	-	3		0	
RENWOOD 3260	75		58.2	+	26	-	33		1		0	
MD71-5	75		55.1	-	27		29	-	4	+	0	
GA931233E17(D)	75		57.8	+	28	+	34	+	3		0	
VA02W-567	75		58.1	+	26	-	31		2	-	0	
VA01W-18	74		56.5		28	+	31		2	-	0	
NC99-13022(R)	74		56.4		29	+	31		2	-	0	
VA97W-375WS	74		55.5	-	27		28	-	3		0	
VA98W-627WS	74		54.6	-	27		32		4	+	0	
VA01W-310	74		57.4	+	27		31		1		0	
VA02W-513	74		57.9	+	27		29	-	1		0	
VA98W-335	73		56.5		28	+	29	-	4	+	0	
VAN98W-170WS	73		55.2	-	26	-	32		2	-	0	
VA01W-99	73		57.2	+	26	-	32		2	-	0	
VA01W-148	73		56.9		29	+	29	-	2	-	0	

Table 17, continued. Summary of performance of entries in the Virginia Tech Wheat Test, Eastern Virginia AREC, Warsaw, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)	
H-84(D)	73		56.9		27		32		4	+	0	
MV27-0187	73		56.2		26	-	31		5	+	0	
VA98W-627RS	73		56.6		26	-	32		3		0	
VA02W-398	73		55.6	-	26	-	31		3		0	
USG 3650(RT)	72		56.3		29	+	33		4	+	0	
VA00W-286	72		56.3		28	+	31		2	-	0	
VA01W-205	72		56.2		27		30	-	1		1	+
VA01W-353	72		55.1	-	27		30	-	2	-	0	
COKER 9184(D)	72		59.4	+	29	+	32		2	-	0	
V9412(D)	72		57.3	+	26	-	32		4	+	0	
MV5-46	72		57.4	+	26	-	32		2	-	0	
VA02W-267	72		55.6	-	26	-	31		2	-	0	
FEATHERSTONE 520(RT)	71		57.0	+	26	-	32		3		0	
CRAWFORD	71		55.9	-	25	-	32		2	-	0	
VA02W-596	71		56.3		29	+	33		3		0	
MASSEY	70		56.5		28	+	40	+	4	+	0	
MV6-82	70		56.6		26	-	31		2	-	0	
VA01W-154	70		58.0	+	29	+	34	+	2	-	0	
COKER 9295(D)	69		56.2		27		33		4	+	1	+
VA98W-631	69		54.0	-	29	+	31		3		0	
VA00W-526	69		57.8	+	28	+	30	-	2	-	0	
VA01W-145	69		57.5	+	28	+	31		2	-	0	
MV8-29	69		57.5	+	26	-	31		2	-	0	
SS 520(R)	69		55.8	-	26	-	33		2	-	0	
VA02W-370	69		58.0	+	26	-	30	-	1		0	
NC00-15332(R)	68		56.4		30	+	34	+	4	+	0	
VA02W-519	68		55.1	-	26	-	30	-	3		0	
PAT(R)	67		57.1	+	34	+	33		3		0	
SS 8309(R)	67		56.4		29	+	35	+	4	+	0	
NEUSE(R)	66	-	59.0	+	29	+	33		3		0	
NC00-15389(R)	66	-	57.5	+	25	-	30	-	4	+	0	
COKER B970051(D)	66	-	55.2	-	31	+	29	-	2	-	0	
PIONEER 26R12(D)	66	-	58.3	+	28	+	31		3		0	
V9212(D)	66	-	54.8	-	28	+	33		4	+	1	+
RENWOOD 3706	65	-	56.9		27		30	-	5	+	0	
RACHEL	64	-	54.8	-	26	-	32		5	+	1	+
COKER 9375	63	-	54.8	-	30	+	35	+	3		0	
Average	74		56.5		27		32		3		0	
LSD (0.05)	8		0.5		1		2		1		0	
C.V.	6		0.6		2		4		31		569	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible. There was no significant lodging at this location.

Table 18. Summary of performance of entries in the Virginia Tech Wheat Test, Tidewater AREC, Holland, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0.2-10)	
VA02W-596	90	+	55.1		0.2	-
VA01W-21	88	+	57.4	+	0.7	-
VA01W-353	86	+	55.1		1.1	
VA01W-145	80	+	55.8		1.3	
VA99W-176	80	+	55.4		1.9	
USG 3209(RT)	76		55.0		0.5	-
VA01W-112	75		55.8		0.2	-
VA02W-513	75		58.1	+	0.2	-
MV5-46	73		57.1	+	1.7	
VA02W-398	73		54.2	-	0.2	-
VA01W-18	72		56.4		0.9	-
MV6-82	72		56.4		0.2	-
V9412(D)	72		57.1	+	0.5	-
VAN98W-342	70		56.0		0.2	-
RACHEL	69		55.0		0.5	-
VA98W-335	68		55.1		1.9	
VA98W-631	68		53.0	-	0.5	-
PIONEER XW02M(D)	68		56.3		1.9	
VA97W-375WS	68		55.1		1.1	
CRAWFORD	68		56.7		0.3	-
COKER 9184(D)	67		58.0	+	0.2	-
PIONEER 26R24(D)	67		56.1		3.3	
PIONEER 26R58(D)	67		54.3	-	2.1	
VA00W-286	66		55.5		0.2	-
PIONEER 26R15(D)	66		54.1	-	2.2	
VA98W-627WS	66		56.2		1.3	
VA00W-526	65		56.2		1.0	
USG 3706(RT)	65		57.0	+	2.5	
McCORMICK	65		56.6		4.7	+
TRIBUTE	65		58.2	+	0.5	-
VA02W-553	65		55.8		1.5	
VA02W-683	65		53.1	-	6.5	+
VA99W-28	64		53.2	-	3.7	
SS 8309(R)	64		54.6		0.2	-
VA02W-124	64		56.2		4.1	
COKER 9295(D)	63		54.2	-	0.2	-
VA01W-148	63		55.2		0.2	-
SS 8302(R)	63		55.8		0.2	-
VA97W-24	63		56.1		2.5	
VA98W-627RS	63		56.1		1.2	
VA02W-567	63		57.2	+	0.4	-
USG 3650(RT)	62		54.2	-	0.7	-
VA01W-99	62		55.9		0.2	-
VA01W-205	62		55.6		1.1	

Table 18, continued. Summary of performance of entries in the Virginia Tech Wheat Test, Tidewater AREC, Holland, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0.2-10)	
NC00-15389(R)	62		57.5	+	0.4	-
MV27-0187	62		56.0		3.7	
VA97W-375RS	62		55.6		1.5	
VA01W-310	62		56.8		1.8	
VA02W-555	62		54.5		0.2	-
RENWOOD 3260	61		57.6	+	0.9	-
SS 8308(R)	61		56.2		0.2	-
VA00W-366	61		56.0		0.2	-
VA02W-519	61		53.6	-	1.3	
USG 3592(RT)	60		55.9		4.9	+
MV8-29	60		57.1	+	2.1	
SS 550(B)	60		55.1		1.7	
SS 520(R)	60		56.0		2.5	
RENWOOD 3706	60		56.2		0.2	-
COKER 9375	60		53.4	-	4.6	+
VA02W-370	60		56.7		1.4	
FEATHERSTONE 520(RT)	59		55.9		1.5	
COKER B970051(D)	59		52.7	-	1.9	
GA931233E17(D)	59		57.0	+	7.7	+
PIONEER 26R12(D)	58		56.9		1.5	
MD71-5	58		54.9		0.2	-
CHOPTANK	57		56.5		0.2	-
COKER 9312(D)	57		56.9		2.0	
SS 560(R)	57		55.1		4.0	
SISSON	56		55.6		2.7	
VA01W-154	56		56.1		0.2	-
VA00W-38	55		54.0	-	2.8	
VAN98W-170WS	55		56.2		0.7	-
MASSEY	54		55.3		0.9	-
VA02W-267	54		54.7		2.4	
PAT(R)	53		55.0		0.2	-
NC99-13022(R)	52		54.6		4.5	+
V9212(D)	52		53.3	-	0.7	-
NEUSE(R)	51		56.8		2.3	
H-84(D)	49	-	55.8		1.5	
NC00-15332(R)	45	-	54.7		3.0	
Average	64		55.7		1.6	
LSD (0.05)	15		1.3		2.7	
C.V.	15		1.4		107	

Released cultivars are shown in bold print.
Data are based on 3 replications at this site.
Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

Table 19. Summary of performance of entries in the Virginia Tech Wheat Test, Northern Piedmont AREC, Orange, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Barley Yellow Dwarf Virus (0-9)	
SS 8308(R)	88	+	57.8	+	31		40		0.5		0	
USG 3706(RT)	87	+	55.8		31		38		1.2		0	
CRAWFORD	87	+	56.4		30	-	41	+	0.6		0	
USG 3209(RT)	86	+	56.4		31		38		0.7		0	
VA01W-21	86	+	57.5	+	30	-	39		0.7		0	
VA99W-176	85	+	55.8		30	-	43	+	0.5		0	
USG 3592(RT)	84	+	56.5		32	+	43	+	0.8		0	
VA02W-555	82	+	55.5		31		35	-	0.7		0	
VA01W-18	81		56.8		32	+	40		0.7		1	
V9412(D)	81		58.3	+	31		41	+	0.2		0	
SS 550(B)	81		56.0		31		40		0.8		0	
VA97W-24	81		57.1		32	+	44	+	0.8		0	
COKER B970051(D)	80		55.2		34	+	38		0.3		2	+
RENWOOD 3260	80		57.8	+	31		41	+	0.5		0	
SISSON	80		55.7		30	-	39		0.4		0	
MV5-46	79		57.4	+	31		40		0.6		0	
VA02W-124	79		56.9		32	+	42	+	0.3		0	
VA02W-683	79		54.4	-	31		37	-	1.2		1	
VA01W-112	78		55.5		31		37	-	0.4		2	+
VA01W-205	78		55.8		31		36	-	0.5		4	+
NC00-15332(R)	78		55.8		32	+	43	+	0.5		0	
SS 520(R)	78		54.0	-	30	-	41	+	1.4		0	
SS 560(R)	78		57.0		32	+	39		0.2		0	
VA02W-267	78		55.8		30	-	38		0.3		1	
VA99W-28	77		54.4	-	31		41	+	0.2		0	
VA01W-99	77		57.8	+	30	-	40		0.6		0	
TRIBUTE	77		58.8	+	31		36	-	0.6		0	
VA01W-310	77		57.7	+	32	+	40		0.3		4	+
VA02W-513	77		56.9		31		35	-	0.5		2	+
VA02W-596	77		56.6		33	+	38		0.3		2	+
VA01W-353	76		53.9	-	30	-	37	-	0.6		0	
MV8-29	76		58.0	+	32	+	39		0.7		0	
RACHEL	76		56.0		30	-	41	+	0.3		0	
VA02W-370	76		56.7		30	-	37	-	0.2		0	
VA02W-398	76		54.7	-	31		39		0.5		0	
VA01W-145	75		57.1		32	+	37	-	0.6		2	+
PIONEER 26R12(D)	75		58.0	+	32	+	40		0.2		0	
SS 8302(R)	75		57.4	+	32	+	41	+	0.2		1	
VA97W-375RS	75		55.1	-	31		38		0.5		0	
PIONEER 26R24(D)	75		56.1		30	-	40		1.0		0	
COKER 9375	75		54.5	-	33	+	45	+	0.5		0	
PIONEER 26R58(D)	75		53.8	-	31		39		0.2		2	+
VA02W-567	75		57.2		31		39		0.8		1	
FEATHERSTONE 520(RT)	74		57.6	+	31		41	+	0.7		0	

Table 19, continued. Summary of performance of entries in the Virginia Tech Wheat Test, Northern Piedmont AREC, Orange, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Barley Yellow Dwarf Virus (0-9)	
VAN98W-342	74		53.9	-	30	-	36	-	0.2		0	
VA00W-38	74		54.5	-	31		41	+	1.8	+	0	
VA00W-286	74		55.8		33	+	37	-	0.2		2	+
MV6-82	74		56.6		30	-	38		0.2		0	
PIONEER 26R15(D)	74		55.4		31		39		0.2		0	
McCORMICK	74		57.9	+	31		36	-	0.2		0	
MD71-5	74		54.8	-	31		36	-	0.6		0	
VA00W-366	74		57.0		31		35	-	0.2		0	
USG 3650(RT)	73		56.1		32	+	42	+	0.3		0	
NC99-13022(R)	73		55.7		31		38		0.2		0	
COKER 9312(D)	73		56.7		31		38		0.2		2	+
PAT(R)	72		57.3	+	35	+	42	+	0.2		0	
PIONEER XW02M(D)	72		55.1	-	31		35	-	0.2		2	+
RENWOOD 3706	72		55.8		30	-	37	-	0.2		0	
V9212(D)	72		56.9		31		44	+	0.8		0	
VA00W-526	71		56.4		32	+	35	-	0.2		1	
H-84(D)	71		56.4		31		41	+	0.3		0	
MV27-0187	71		55.8		31		36	-	0.2		0	
VA98W-627RS	71		55.2		32	+	39		0.6		0	
VA98W-627WS	71		54.2	-	31		39		0.6		0	
VA97W-375WS	70		54.8	-	31		37	-	0.6		0	
CHOPTANK	69		54.9	-	30	-	36	-	0.2		0	
VAN98W-170WS	69		57.0		30	-	40		0.5		0	
MASSEY	68	-	56.8		31		46	+	2.7	+	0	
NC00-15389(R)	68	-	56.8		30	-	39		0.5		2	+
SS 8309(R)	68	-	56.9		32	+	42	+	0.2		0	
VA01W-148	67	-	56.3		32	+	33	-	0.2		2	+
GA931233E17(D)	67	-	56.1		31		42	+	2.2	+	0	
VA02W-519	67	-	54.5	-	31		36	-	0.5		2	+
COKER 9295(D)	66	-	54.9	-	34	+	40		0.5		0	
VA98W-335	66	-	56.3		32	+	34	-	0.2		0	
NEUSE(R)	66	-	58.7	+	33	+	39		0.8		0	
VA01W-154	66	-	56.7		32	+	40		0.6		0	
COKER 9184(D)	65	-	58.6	+	34	+	38		0.2		2	+
VA02W-553	65	-	56.2		31		39		1.2		0	
VA98W-631	64	-	53.5	-	31		36	-	0.2		0	
Average	75		56.2		31		39		0.5		0	
LSD (0.05)	7		1.1		1		2		1.0		2	
C.V.	7		1.3		2		4		144		327	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average.

Belgian Lodging Scale=Area X Intensity X 0.2. Area=1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity=1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0=highly resistant and 9=highly susceptible.

Table 20. Summary of performance of entries in the Virginia Tech Wheat Test, Southern Piedmont AREC, Blackstone, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)	
USG 3209(RT)	77	+	56.7	-
USG 3592(RT)	74	+	58.3	+
VA02W-555	74	+	57.1	
VA01W-205	71	+	57.6	
SISSON	70		56.8	
MV5-46	70		58.9	+
VA01W-21	70		58.5	+
VA02W-683	70		55.8	-
PIONEER 26R12(D)	69		59.0	+
RENWOOD 3260	68		59.1	+
VA98W-335	67		57.8	
VA02W-513	67		58.4	+
VA01W-18	66		57.3	
MV8-29	66		58.6	+
SS 560(R)	66		57.8	
GA931233E17(D)	66		58.5	+
VAN98W-342	65		56.9	
VA01W-353	65		56.1	-
COKER 9184(D)	65		60.3	+
COKER 9312(D)	65		58.2	
VA02W-370	65		58.1	
VA01W-112	64		57.0	
MV6-82	64		57.8	
VA97W-375WS	64		58.1	
VA02W-398	64		56.7	-
VA02W-567	64		59.0	+
VA02W-596	64		57.3	
VAN98W-170WS	63		57.9	
VA01W-148	63		57.1	
PAT(R)	63		58.4	+
VA97W-375RS	63		57.4	
PIONEER 26R24(D)	63		57.5	
PIONEER 26R58(D)	63		56.8	
VA00W-366	63		57.8	
FEATHERSTONE 520(RT)	62		59.0	+
NC00-15389(R)	62		58.6	+
SS 550(B)	62		57.5	
CRAWFORD	62		57.6	
VA02W-519	62		56.6	-
NC00-15332(R)	61		58.8	+
COKER B970051(D)	61		56.6	-
PIONEER XW02M(D)	61		56.8	
V9412(D)	61		58.2	
SS 8302(R)	61		58.3	+

Table 20, continued. Summary of performance of entries in the Virginia Tech Wheat Test, Southern Piedmont AREC, Blackstone, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)	
VA97W-24	61		58.3	+
McCORMICK	61		58.6	+
VA98W-627WS	61		56.8	
VA01W-310	61		58.5	+
VA02W-124	61		57.1	
VA02W-553	61		57.7	
VA01W-99	60		58.1	
VA01W-145	60		57.7	
SS 8308(R)	60		58.3	+
VA00W-286	59		57.0	
NEUSE(R)	59		59.6	+
USG 3706(RT)	59		57.2	
NC99-13022(R)	59		58.3	+
PIONEER 26R15(D)	59		55.5	-
MD71-5	59		56.4	-
VA98W-627RS	59		57.3	
VA01W-154	59		58.0	
CHOPTANK	58		57.1	
VA99W-28	58		56.1	-
H-84(D)	58		56.9	
MV27-0187	58		57.6	
VA99W-176	58		57.0	
VA02W-267	58		57.0	
MASSEY	57		57.9	
SS 8309(R)	57		57.1	
SS 520(R)	57		56.1	-
TRIBUTE	56		59.7	+
VA98W-631	55		55.5	-
VA00W-38	55		56.1	-
COKER 9375	55		56.2	-
COKER 9295(D)	54		56.0	-
VA00W-526	53	-	57.8	
V9212(D)	53	-	56.3	-
USG 3650(RT)	52	-	57.0	
RACHEL	52	-	56.3	-
RENWOOD 3706	52	-	56.8	
Average	62		57.5	
LSD (0.05)	9		0.8	
C.V.	10		1.0	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average.

There was no significant lodging or disease pressure at this location.

Table 21. Summary of performance of entries in the Virginia Tech Wheat Test, Hockman Farms, Strasburg, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0.2-10)	
USG 3209(RT)	77	+	59.3		3.0	+
SS 8302(R)	77	+	60.5	+	0.2	
COKER 9375	75	+	58.1	-	0.7	
VA00W-38	74	+	59.1		0.8	
PIONEER 26R15(D)	74	+	58.7		0.2	
V9412(D)	74	+	60.2	+	0.5	
SS 8308(R)	74	+	59.7		0.4	
SISSON	74	+	59.3		1.0	
SS 8309(R)	73		60.3	+	0.4	
MV5-46	72		60.3	+	0.7	
VA01W-21	72		59.0		0.9	
USG 3706(RT)	71		59.3		1.1	
RACHEL	71		59.2		0.3	
PIONEER 26R24(D)	71		58.8		2.3	
PIONEER 26R58(D)	71		58.9		0.2	
VA02W-398	71		57.4	-	1.6	
VA98W-335	70		59.2		1.1	
VA97W-24	70		58.7		0.7	
CRAWFORD	70		59.4		3.4	+
VA98W-627RS	70		58.6		2.8	+
VA99W-28	69		58.3	-	1.4	
VA01W-18	69		58.8		0.8	
COKER 9184(D)	69		61.2	+	0.3	
RENWOOD 3260	69		59.2		2.1	
SS 550(B)	69		59.2		0.7	
RENWOOD 3706	69		59.6		0.8	
GA931233E17(D)	69		59.3		2.8	+
VA98W-627WS	69		58.3	-	2.0	
VA02W-555	69		58.4		0.4	
VAN98W-342	68		58.2	-	0.6	
VA01W-112	68		58.2	-	1.4	
VA01W-145	68		59.1		1.7	
NC00-15332(R)	68		57.1	-	0.7	
COKER 9312(D)	68		59.4		3.8	+
COKER B970051(D)	68		58.2	-	2.5	
MV27-0187	68		60.2	+	1.1	
PIONEER 26R12(D)	68		59.8		1.7	
VA97W-375WS	68		58.7		0.4	
SS 520(R)	68		58.4		1.2	
TRIBUTE	68		61.5	+	0.6	
VA99W-176	68		59.1		0.9	
VA02W-370	68		59.6		0.3	
VA02W-513	68		59.9	+	0.3	
VA02W-596	68		58.4		0.9	

Table 21, continued. Summary of performance of entries in the Virginia Tech Wheat Test, Hockman Farms, Strasburg, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0.2-10)	
COKER 9295(D)	67		59.2		0.5	
VA00W-286	67		58.7		0.5	
VA01W-353	67		57.2	-	0.3	
MV6-82	67		60.3	+	2.3	
MV8-29	67		59.8		0.7	
VA97W-375RS	67		58.5		1.7	
MD71-5	67		58.4		0.3	
VA02W-567	67		60.0	+	2.6	+
VA02W-683	67		56.7	-	1.2	
USG 3650(RT)	66		59.7		0.4	
PAT(R)	66		59.4		0.2	
PIONEER XW02M(D)	66		58.5		0.2	
SS 560(R)	66		58.1	-	0.8	
VA02W-519	66		59.2		1.6	
MASSEY	65		59.6		4.7	+
VA00W-526	65		59.4		1.2	
VA01W-205	65		58.7		2.1	
H-84(D)	65		59.4		1.4	
V9212(D)	65		59.2		1.4	
VA01W-154	65		60.6	+	0.8	
VA01W-310	65		59.8		1.1	
VA02W-124	65		58.6		1.8	
VA98W-631	64		57.8	-	0.2	
VAN98W-170WS	64		59.2		0.8	
VA01W-148	64		60.1	+	0.2	
FEATHERSTONE 520(RT)	63		59.9	+	1.6	
USG 3592(RT)	63		58.0	-	4.6	+
VA02W-267	63		57.9	-	0.3	
CHOPTANK	62		59.1		0.5	
NEUSE(R)	62		60.8	+	1.1	
McCORMICK	62		60.7	+	1.8	
VA02W-553	62		59.6		1.2	
VA00W-366	61		59.0		0.7	
VA01W-99	60	-	60.1	+	0.4	
NC00-15389(R)	59	-	59.2		1.5	
NC99-13022(R)	56	-	58.3	-	0.3	
Average	67		59.1		1.2	
LSD (0.05)	7		0.8		1.4	
C.V.	7		1.0		88	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average.

Belgian Lodging Scale=Area X Intensity X 0.2. Area=1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

There was no significant disease pressure at this site.

Table 22. Summary of performance of entries in the Virginia Tech Wheat Test, Kentland farm, Blacksburg, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)	
SS 8308(R)	84	+	61.0	+	36	-	31		3	+	2	-
VA99W-176	84	+	57.0	-	36	-	32	+	3	+	3	
VA97W-24	83	+	56.3	-	39	+	32	+	2		2	-
VA02W-267	83	+	57.8		37		31		2		3	
VA01W-353	82	+	56.7	-	37		29		1	-	2	-
MV8-29	81	+	59.7	+	37		31		4	+	3	
COKER B970051(D)	80	+	56.2	-	39	+	29		1	-	3	
USG 3209(RT)	79	+	58.0		37		29		4	+	3	
VA02W-398	79	+	55.6	-	37		29		0	-	3	
MV27-0187	78		58.3		37		30		1	-	3	
PIONEER 26R12(D)	78		59.8	+	38	+	32	+	1	-	3	
V9412(D)	78		59.4	+	37		31		4	+	2	-
SS 550(B)	78		58.3		37		30		5	+	3	
VA01W-21	78		60.0	+	36	-	29		3	+	2	-
USG 3592(RT)	77		58.8	+	38	+	34	+	1	-	2	-
MV5-46	77		59.7	+	37		30		3	+	2	-
CRAWFORD	76		58.6	+	36	-	32	+	1	-	3	
COKER 9375	76		56.3	-	38	+	35	+	3	+	3	
VA02W-124	76		57.7		38	+	32	+	1	-	2	-
FEATHERSTONE 520(RT)	75		58.7	+	37		30		3	+	3	
VA99W-28	75		56.9	-	38	+	32	+	2		2	-
VA01W-18	75		58.1		38	+	30		2		2	-
NC99-13022(R)	75		57.4		38	+	31		1	-	3	
COKER 9312(D)	75		58.1		36	-	30		1	-	2	-
PIONEER 26R24(D)	75		57.8		37		33	+	2		2	-
VA00W-366	75		58.7	+	37		28	-	1	-	3	
VA02W-555	75		56.9	-	37		28	-	2		2	-
VA01W-112	74		56.5	-	37		29		4	+	2	-
VA01W-205	74		58.5		37		28	-	1	-	2	-
USG 3706(RT)	74		57.4		37		30		2		3	
H-84(D)	74		58.2		37		31		3	+	3	
PIONEER 26R15(D)	74		56.8	-	38	+	32	+	1	-	2	-
SS 560(R)	74		57.9		38	+	30		2		2	-
TRIBUTE	74		59.0	+	37		29		0	-	2	-
VA02W-596	74		56.4	-	40	+	31		1	-	3	
PAT(R)	73		58.4		42	+	33	+	3	+	2	-
RENWOOD 3260	73		58.7	+	37		32	+	1	-	3	
SS 8302(R)	73		57.6		38	+	32	+	2		2	-
GA931233E17(D)	73		58.5		38	+	34	+	2		3	
VA98W-627RS	73		57.8		37		30		1	-	3	
VA00W-38	72		56.3	-	37		31		1	-	2	-
VA02W-513	72		59.5	+	37		28	-	1	-	2	-
VA00W-526	71		57.7		38	+	29		2		3	
MV6-82	71		59.1	+	37		31		3	+	3	
McCORMICK	71		60.4	+	37		30		1	-	2	-

Table 22, continued. Summary of performance of entries in the Virginia Tech Wheat Test, Kentland farm, Blacksburg, VA, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)	
MD71-5	71		57.9		37		28	-	1	-	3	
V9212(D)	71		57.4		37		33	+	3	+	3	
VA02W-683	71		56.3	-	36	-	28	-	2		2	-
PIONEER XW02M(D)	70		57.4		38	+	28	-	1	-	3	
SISSON	70		58.3		36	-	29		6	+	3	
PIONEER 26R58(D)	70		56.5	-	37		28	-	3	+	3	
VA02W-519	70		56.6	-	37		28	-	1	-	3	
VA00W-286	69		58.0		38	+	29		1	-	2	-
VA01W-99	69		58.9	+	37		30		3	+	3	
COKER 9184(D)	69		58.9	+	39	+	31		1	-	3	
SS 8309(R)	69		57.6		39	+	31		2		3	
SS 520(R)	69		56.6	-	37		31		2		3	
VA02W-370	69		59.2	+	36	-	28	-	1	-	2	-
VA02W-553	69		58.2		38	+	31		1	-	3	
NC00-15332(R)	68		56.8	-	39	+	30		1	-	3	
NC00-15389(R)	68		58.3		36	-	28	-	1	-	3	
VA98W-627WS	68		56.8	-	37		31		1	-	3	
VAN98W-342	67		57.9		37		26	-	1	-	2	-
NEUSE(R)	67		59.8	+	39	+	32	+	0	-	3	
VA01W-310	67		58.7	+	38	+	30		1	-	3	
VA02W-567	67		58.7	+	37		30		0	-	3	
MASSEY	66		57.6		38	+	36	+	8	+	3	
VA98W-631	66		56.2	-	38	+	31		1	-	3	
USG 3650(RT)	66		57.1		38	+	31		1	-	3	
VAN98W-170WS	66		58.2		37		32	+	2		2	-
VA01W-145	66		58.0		38	+	28	-	1	-	3	
VA97W-375RS	66		57.3		37		28	-	1	-	3	
VA98W-335	65	-	58.0		38	+	27	-	0	-	3	
VA97W-375WS	65	-	56.2	-	37		28	-	1	-	3	
CHOPTANK	64	-	57.4		37		27	-	1	-	3	
VA01W-148	64	-	56.4	-	39	+	26	-	0	-	2	-
RENWOOD 3706	64	-	57.1		37		29		2		4	+
VA01W-154	64	-	58.0		38	+	30		2		3	
COKER 9295(D)	63	-	55.9	-	41	+	32	+	0	-	3	
RACHEL	61	-	57.3		37		28	-	5	+	4	+
Average	72		57.8		37		30		2		3	
LSD (0.05)	7		0.8		1		2		1		1	
C.V.	7		0.9		1		5		50		19	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible. There was no significant lodging at this location.

Table 23. Summary of performance of entries in the Virginia Tech Wheat Test, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)	
	(7)		(7)		(3)		(3)		(3)		(1)		(1)		(3)		(1)	
USG 3209(RT)	78	+	56.9		32		32	-	1.4		1		4	+	1	-	0	
VA01W-21	76	+	58.1	+	31	-	33	-	1.2		1		3	+	1	-	0	
VA97W-24	74	+	57.2		34	+	37	+	1.2		1		2		2		0	
VA99W-176	74	+	56.6	-	31	-	36	+	1.2		1		3	+	2		0	
VA01W-353	73	+	55.5	-	32		32	-	0.6		1		1	-	1	-	0	
USG 3706(RT)	72	+	57.2		32		33	-	1.4		1		2		2		0	
SS 8308(R)	72	+	58.0	+	32		35	+	0.4		1		3	+	1	-	0	
VA02W-596	72	+	56.4	-	34	+	34		0.6		1		1	-	3	+	0	
VA01W-18	71	+	57.3		33	+	34		0.7		1		2		1	-	0	
USG 3592(RT)	71	+	57.3		33	+	38	+	3.1	+	1		1	-	1	-	0	
V9412(D)	71	+	58.3	+	32		35	+	0.4		2	+	4	+	2		0	
MV5-46	71	+	58.1	+	32		34		1.0		1		3	+	1	-	0	
VA02W-398	71	+	55.5	-	32		33	-	0.8		1		0	-	2		0	
VA02W-555	71	+	56.3	-	32		31	-	0.4		1		2		1	-	0	
VA01W-112	70		56.4	-	32		32	-	0.7		1		4	+	2		0	
PIONEER 26R15(D)	70		55.8	-	33	+	35	+	0.7		2	+	1	-	1	-	0	
PIONEER 26R24(D)	70		56.9		31	-	36	+	1.9		2	+	2		1	-	0	
CRAWFORD	70		57.2		31	-	35	+	1.4		1		1	-	2		0	
VA02W-683	70		55.2	-	32		32	-	2.6	+	1		2		1	-	0	
VA99W-28	69		55.6	-	33	+	35	+	1.8		1		2		1	-	0	
VA01W-205	69		56.9		32		31	-	1.1		2	+	1	-	2		1	+
MV8-29	69		58.4	+	32		34		1.0		1		4	+	2		0	
PIONEER XW02M(D)	69		56.7	-	32		31	-	0.9		1		1	-	2		0	
RENWOOD 3260	69		58.3	+	32		36	+	1.1		1		1	-	1	-	0	
SS 8302(R)	69		57.7	+	34	+	36	+	0.2		2	+	2		2		0	
SS 560(R)	69		57.1		33	+	34		1.4		1		2		1	-	0	
PIONEER 26R58(D)	69		55.6	-	32		33	-	0.7		2	+	3	+	3	+	0	
VA02W-124	69		57.0		33	+	36	+	1.7		1		1	-	1	-	0	
VA02W-513	69		58.3	+	32		31	-	0.3		1		1	-	2		0	
VAN98W-342	68		56.2	-	32		30	-	0.3		1		1	-	2		0	
COKER 9312(D)	68		57.7	+	31	-	33	-	1.9		2	+	1	-	2		0	
PIONEER 26R12(D)	68		58.5	+	33	+	34		1.3		2	+	1	-	2		0	
SS 550(B)	68		56.8	-	32		34		0.9		1		5	+	2		0	
SISSON	68		56.9		31	-	33	-	1.2		1		6	+	2		0	
TRIBUTE	68		59.0	+	32		32	-	0.5		2	+	0	-	2		0	
VA01W-145	67		57.3		33	+	32	-	1.1		1		1	-	2		0	
COKER B970051(D)	67		55.5	-	35	+	32	-	1.4		1		1	-	2		0	
MV27-0187	67		57.1		32		33	-	1.4		1		1	-	2		0	
MV6-82	67		57.7	+	31	-	33	-	0.9		1		3	+	1	-	0	
VA97W-375RS	67		56.7	-	32		32	-	1.1		1		1	-	2		0	
McCORMICK	67		58.3	+	32		33	-	1.9		1		1	-	1	-	0	
GA931233E17(D)	67		57.8	+	33	+	37	+	3.9	+	2	+	2		2		0	
VA98W-627RS	67		56.7	-	32		34		1.4		1		1	-	2		0	
VA98W-627WS	67		56.0	-	32		34		1.2		1		1	-	2		0	
VA01W-310	67		58.1	+	33	+	34		0.9		2	+	1	-	3	+	0	

Table 23, continued. Summary of performance of entries in the Virginia Tech Wheat Test, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)	
	(7)		(7)		(3)		(3)		(3)		(1)		(1)		(3)		(1)	
VA02W-370	67		57.7	+	31	-	32	-	0.5		1		1	-	1	-	0	
VA98W-335	66		57.0		33	+	30	-	0.9		1		0	-	2		0	
VA00W-38	66		55.7	-	32		35	+	1.6		1		1	-	1	-	0	
VA00W-286	66		56.8	-	33	+	33	-	0.3		1		1	-	2		0	
COKER 9184(D)	66		59.3	+	34	+	34		0.2		2	+	1	-	2		0	
VA97W-375WS	66		56.2	-	32		31	-	0.6		1		1	-	2		0	
MD71-5	66		56.2	-	32		31	-	0.4		1		1	-	2		0	
VA00W-366	66		57.3		32		31	-	0.4		2	+	1	-	2		0	
VA02W-553	66		57.4	+	32		35	+	1.3		1		1	-	2		1	+
VA02W-567	66		58.2	+	32		33	-	1.2		1		0	-	2		0	
FEATHERSTONE 520(RT)	65	-	57.9	+	32		35	+	1.3		1		3	+	2		0	
VA01W-99	65	-	57.9	+	32		34		0.4		1		3	+	1	-	0	
VA01W-148	65	-	56.9		33	+	29	-	0.2		1		0	-	2		0	
NC99-13022(R)	65	-	56.8	-	33	+	33	-	1.3		1		1	-	2		0	
SS 8309(R)	65	-	56.9		33	+	36	+	0.3		1		2		2		0	
COKER 9375	65	-	55.3	-	34	+	38	+	1.5		1		3	+	2		0	
VA02W-267	65	-	56.3	-	31	-	34		0.8		1		2		2		0	
VA02W-519	65	-	55.9	-	32		32	-	1.0		1		1	-	3	+	0	
VA00W-526	64	-	57.5	+	33	+	32	-	0.7		1		2		2		0	
USG 3650(RT)	64	-	56.8	-	33	+	36	+	0.4		2	+	1	-	2		0	
RACHEL	64	-	56.5	-	31	-	34		0.3		1		5	+	3	+	1	+
SS 520(R)	64	-	55.9	-	31	-	35	+	1.6		2	+	2		2		0	
CHOPTANK	63	-	56.9		32		31	-	0.3		1		1	-	2		0	
COKER 9295(D)	63	-	56.0	-	34	+	35	+	0.6		1		0	-	2		1	+
VA98W-631	63	-	54.9	-	33	+	32	-	0.4		2	+	1	-	2		0	
VAN98W-170WS	63	-	57.2		32		35	+	0.6		1		2		1	-	0	
PAT(R)	63	-	57.6	+	37	+	36	+	0.2		2	+	3	+	2		0	
NC00-15332(R)	63	-	56.6	-	34	+	36	+	1.1		1		1	-	2		0	
NC00-15389(R)	63	-	57.8	+	31	-	33	-	0.8		1		1	-	3	+	0	
H-84(D)	63	-	57.2		32		35	+	1.1		3	+	3	+	2		0	
MASSEY	62	-	57.3		33	+	41	+	2.7	+	1		8	+	2		0	
NEUSE(R)	62	-	59.1	+	34	+	35	+	1.2		1		0	-	2		0	
RENWOOD 3706	62	-	56.8	-	32		32	-	0.4		2	+	2		3	+	0	
V9212(D)	62	-	56.1	-	32		37	+	0.9		1		3	+	2		1	+
VA01W-154	62	-	57.9	+	33	+	35	+	0.7		1		2		2		0	
Average	68		57.1		32		34		1.0		1		2		2		0	
LSD (0.05)	3		0.3		1		1		1.0		1		1		1		0	
C.V.	8		1.1		2		4		110		39		50		60		569	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average. The number in parentheses below column headings indicates the number of locations on which data are based.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 24. Two year average summary of performance of all entries in the Virginia Tech Wheat Tests, 2003 and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)		Glume Blotch (0-9)	
	(12)		(12)		(6)		(6)		(6)		(5)		(3)		(3)		(1)		(2)	
VA99W-176	73	+	56.1		34	-	37	+	1.6		0	-	2		2		0		2	
VA97W-24	72	+	56.1		37	+	39	+	1.9	+	2	+	3	+	2		0		2	
MV5-46	71	+	57.8	+	34	-	35		1.1		0	-	4	+	1	-	0		1	-
USG 3209(RT)	70	+	55.4	-	35		34	-	1.7		1		5	+	1	-	0		3	+
VA01W-353	70	+	54.7	-	34	-	33	-	0.4	-	0	-	2		1	-	0		2	
VAN98W-342	69	+	56.0		34	-	32	-	0.4	-	0	-	2		2		0		2	
VA01W-18	69	+	56.4		36	+	34	-	0.8		0	-	2		1	-	0		2	
SS 520(R)	69	+	56.0		34	-	37	+	1.4		1		2		2		0		1	-
TRIBUTE	69	+	58.4	+	35		34	-	1.0		0	-	1	-	2		0		1	-
VA01W-205	68		56.5		35		32	-	1.1		1		0	-	2		1	+	3	+
SISSON	68		56.4		34	-	34	-	1.7		1		6	+	2		0		2	
VA97W-375RS	68		56.3		35		33	-	1.4		0	-	1	-	2		0		2	
CRAWFORD	68		56.6	+	34	-	36	+	1.5		1		0	-	2		0		2	
VA97W-375WS	68		55.9		35		33	-	1.0		0	-	0	-	2		0		2	
SS 560(R)	68		55.9		36	+	34	-	0.9		1		4	+	1	-	0		2	
PIONEER 26R24(D)	68		55.8	-	34	-	37	+	1.8		1		2		1	-	0		2	
SS 550(B)	68		55.9		35		35		1.6		1		5	+	2		0		1	-
VA99W-28	68		54.7	-	36	+	36	+	1.9	+	2	+	2		1	-	0		1	-
PIONEER 26R58(D)	67		54.9	-	35		34	-	0.4	-	2	+	4	+	3	+	0		4	+
VA01W-112	67		54.9	-	35		34	-	1.1		0	-	5	+	2		0		2	
MD71-5	67		56.0		35		32	-	0.3	-	0	-	1	-	2		0		2	
McCORMICK	67		57.9	+	35		33	-	1.1		0	-	0	-	1	-	0		1	-
GA931233E17(D)	66		56.9	+	35		38	+	3.4	+	1		1	-	2		0		2	
VA98W-631	66		54.1	-	36	+	34	-	0.3	-	1		1	-	2		0		2	
VA01W-145	66		56.1		36	+	33	-	1.0		0	-	1	-	2		0		2	
CHOPTANK	66		56.5		34	-	32	-	0.5	-	0	-	1	-	2		0		2	
VA00W-38	66		55.1	-	35		36	+	1.2		0	-	1	-	1	-	0		2	
VA98W-335	65		56.2		36	+	31	-	0.8		1		0	-	2		0		3	+
FEATHERSTONE 520(RT)	65		56.9	+	35		36	+	2.3	+	2	+	4	+	2		0		2	
VA00W-286	65		55.8	-	36	+	34	-	0.8		1		1	-	2		0		1	-
V9212(D)	64		55.7	-	34	-	39	+	1.2		3	+	3	+	2		1	+	3	+
RENWOOD 3706	64		56.4		35		33	-	0.5	-	1		1	-	3	+	0		3	+
VA01W-148	64		56.1		36	+	30	-	0.2	-	1		0	-	2		0		2	
VA01W-99	64		56.8	+	34	-	35		0.6		1		3	+	1	-	0		2	
COKER 9375	64		54.5	-	36	+	39	+	1.8		2	+	5	+	2		0		1	-
VAN98W-170WS	64		56.9	+	34	-	36	+	1.1		1		1	-	1	-	0		1	-
COKER 9184(D)	63	-	58.0	+	37	+	34	-	0.3	-	2	+	1	-	2		0		2	
VA00W-526	63	-	56.4		36	+	32	-	1.1		0	-	1	-	2		0		2	
USG 3650(RT)	62	-	55.6	-	35		37	+	0.5	-	2	+	1	-	2		0		3	+
COKER 9295(D)	61	-	54.8	-	35		36	+	0.8		2	+	0	-	2		1	+	2	

Table 24, continued. Two year average summary of performance of all entries in the Virginia Tech Wheat Tests, 2003 and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodg-ing (0.2-10)		Pow-dery Mil-dew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)		Glume Blotch (0-9)	
	(12)		(12)		(6)		(6)		(6)		(5)		(3)		(3)		(1)		(2)	
NEUSE(R)	60	-	58.4	+	37	+	35		1.7		0	-	0	-	2		0		2	
MASSEY	59	-	56.3		36	+	41	+	3.3	+	2	+	8	+	2		0		2	
Average	66		56.2		35		35		1.2		1		2		2		0		2	
LSD (0.05)	3		0.4		1		1		0.7		0.4		1		1		0.4		1	
C.V.	9		1.7		6		3		96		61		44		56		533		33	

Released cultivars are shown in bold print.

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

The number in parentheses below column headings indicates the number of location-years on which data are based.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 25. Three year average summary of performance of all entries in the Virginia Tech Wheat Tests, 2002, 2003, and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Wheat Spindle Streak Virus (0-9)		Glume Blotch (0-9)		Early Height (In)	
	(18)		(18)		(10)		(9)		(9)		(8)		(5)		(5)		(1)		(2)		(1)	
VA97W-24	77	+	56.7		33	+	38	+	1.4		2	+	3	+	2		0		2		6.7	
VA99W-176	75	+	56.3	-	30	-	36	+	1.5		0	-	3	+	2		0		2		6.8	
VA97W-375RS	75	+	56.8		31		33	-	1.0		0	-	1	-	2		0		2		6.5	
TRIBUTE	75	+	59.1	+	31		33	-	0.9		0	-	0	-	2		0		1	-	5.0	-
SS 520(R)	74	+	56.4	-	30	-	36	+	1.3		1	+	3	+	2		0		1	-	8.7	+
USG 3209(RT)	74	+	56.0	-	31		33	-	1.8	+	1	+	5	+	2		0		3	+	8.0	
SISSON	74	+	56.9		30	-	33	-	1.6	+	1	+	5	+	2		0		2		7.3	
SS 550(R)	74	+	56.5	-	31		35	+	1.5		1	+	4	+	2		0		1	-	7.0	
VA97W-375WS	74	+	56.5	-	31		32	-	0.8		0	-	0	-	2		0		2		6.5	
McCORMICK	74	+	58.5	+	31		33	-	0.9		0	-	0	-	2		0		1	-	5.5	-
VAN98W-342	73	+	56.6		31		31	-	0.3	-	0	-	1	-	2		0		2		6.3	
SS 560(R)	73	+	56.7		33	+	34		0.7		2	+	3	+	2		0		2		6.0	
CHOPTANK	72		57.0		31		31	-	0.4	-	0	-	1	-	2		0		2		7.5	
VA00W-526	72		57.2	+	32	+	32	-	1.0		0	-	1	-	2		0		2		7.2	
PIONEER 26R24(B)	72		56.6		31		36	+	1.5		1	+	3	+	1	-	0		2		6.3	
VA98W-335	71		57.0		33	+	31	-	0.6	-	1	+	0	-	2		0		3	+	6.3	
VA98W-631	70		54.8	-	32	+	34		0.3	-	2	+	1	-	2		0		2		6.2	
RENWOOD 3706	70		57.2	+	31		33	-	0.4	-	1	+	1	-	3	+	0		3	+	5.5	-
VA00W-38	69	-	55.6	-	31		35	+	1.5		1	+	1	-	1	-	0		2		9.5	+
FEATHERSTONE 520(RT)	68	-	57.5	+	32	+	35	+	2.0	+	2	+	3	+	2		0		2		8.7	+
USG 3650 (RT)	68	-	56.4	-	32	+	36	+	0.7		2	+	1	-	2		0		3	+	6.7	
COKER 9184(D)	67	-	58.4	+	34	+	34		0.4	-	2	+	1	-	3	+	0		2		6.2	
NEUSE(R)	66	-	58.5	+	34	+	35	+	1.3		0	-	0	-	2		0		2		6.0	
COKER 9295(D)	65	-	55.4	-	32	+	36	+	0.7		2	+	0	-	3	+	1	+	2		9.0	+
MASSEY	61	-	56.5	-	32	+	40	+	3.2	+	2	+	7	+	2		0		2		8.7	+
Average	71		56.8		31		34		1.1		1		2		2		0		2		7.0	
LSD (0.05)	2		0.3		1		1		0.5				1		1		0		1		1.3	
C.V.	9		1.7		7		3		96		66		45		42		707		32		11.1	

Released cultivars are shown in bold print.

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately.

The number in parentheses below column headings indicates the number of location-years on which data are based.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

SECTION 3 - EVALUATION OF FUNGICIDE/VARIETY INTERACTIONS

Genetic yield potential is certainly one of the keys to variety success. In most cases the top yielding varieties/lines with fungicide and Gaucho® were also the top yielding lines without Gaucho® seed treatment and fungicide in the spring.

The treated tests are conducted at Warsaw and Painter to assure that each variety is given an opportunity to express its yield potential even if it is susceptible to foliar diseases that can be controlled by Baytan® and Tilt® and insect pressures that can be controlled by Gaucho® (Tables 26-34). Variety comparisons should not be made between treated and untreated plots since the experiments were located in different areas of the field.

Table 26. Summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Warsaw, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Barley Yellow Dwarf Virus (0-9)	
VA02W-398	98	+	55.3	-	26	-	33		0	
VA97W-24	97	+	56.8		29	+	35	+	1	+
PIONEER 26R15(D)	96	+	54.5	-	29	+	33		1	+
H-84(D)	95	+	56.9		28	+	33		1	+
RACHEL	95	+	56.1		26	-	34	+	0	
VA99W-176	95	+	55.5	-	26	-	33		1	+
MD71-5	94	+	55.4	-	27		30	-	1	+
PIONEER 26R58(D)	93		55.2	-	27		32		0	
SISSON	93		56.7		26	-	32		0	
USG 3209(RT)	93		56.1		27		31		0	
VA02W-555	93		56.0		26	-	30	-	0	
SS 560(R)	92		57.3	+	29	+	33		0	
SS 8302(R)	92		56.5		30	+	34	+	1	+
SS 8308(R)	92		56.8		27		32		0	
VAN98W-342	92		55.3	-	27		30	-	1	+
GA931233E17(D)	91		57.5	+	28	+	38	+	0	
TRIBUTE	91		57.9	+	27		32		0	
VA01W-353	91		55.5	-	26	-	31		1	+
VA02W-519	91		55.0	-	26	-	32		0	
VA97W-375RS	91		56.4		27		32		1	+
PIONEER 26R24(D)	90		56.5		27		34	+	0	
RENWOOD 3706	90		56.9		27		30	-	0	
SS 520(R)	90		55.2	-	26	-	35	+	0	
MV27-0187	89		56.0		26	-	32		1	+
VA00W-286	89		56.4		28	+	32		0	
VA02W-513	89		58.1	+	28	+	31		0	
SS 550(B)	88		56.5		26	-	32		0	
VA01W-148	88		56.9		28	+	29	-	0	
PIONEER XW02M(D)	87		56.2		26	-	29	-	0	
USG 3592(RT)	87		57.3	+	28	+	35	+	0	

Table 26, continued. Summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Warsaw, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Barley Yellow Dwarf Virus (0-9)	
VA01W-112	87		55.4	-	27		31		0	
VA01W-154	87		58.5	+	28	+	33		0	
VA98W-335	87		56.4		28	+	30	-	0	
CHOPTANK	86		56.5		27		29	-	0	
COKER 9312(D)	86		57.4	+	27		32		0	
VA00W-366	86		56.8		27		30	-	0	
VA00W-38	86		54.9	-	27		33		0	
VA01W-18	86		57.1	+	30	+	33		0	
VA01W-21	86		57.4	+	26	-	32		0	
VA02W-553	86		57.2	+	26	-	34	+	0	
FEATHERSTONE 520(RT)	85		57.8	+	26	-	34	+	0	
MV5-46	85		57.6	+	26	-	32		0	
MV8-29	85		57.8	+	26	-	31		0	
SS 8309(R)	85		55.9	-	29	+	35	+	1	+
VA98W-631	85		54.1	-	28	+	33		1	+
VA99W-28	85		55.2	-	29	+	34	+	0	
McCORMICK	84		56.9		27		31		0	
NC99-13022(R)	84		56.6		28	+	32		0	
VA00W-526	84		58.0	+	28	+	30	-	1	+
VA01W-205	84		56.5		28	+	29	-	0	
VA02W-567	84		58.2	+	26	-	31		0	
VA97W-375WS	84		55.3	-	28	+	31		0	
VA98W-627RS	84		56.7		26	-	32		0	
COKER 9295(D)	83		55.6	-	30	+	34	+	0	
COKER B970051(D)	83		55.9	-	31	+	31		0	
MASSEY	83		56.9		28	+	39	+	0	
PAT(R)	83		57.2	+	34	+	36	+	0	
USG 3706(RT)	83		56.6		27		30	-	0	
V9212(D)	83		55.1	-	28	+	37	+	1	+
VA02W-124	83		56.6		28	+	33		0	
VA02W-683	83		55.3	-	27		31		0	
NC00-15332(R)	82		56.4		29	+	35	+	0	
PIONEER 26R12(D)	82		58.0	+	28	+	33		0	
VA02W-267	82		55.8	-	26	-	30	-	0	
COKER 9375	81		54.3	-	29	+	37	+	0	
MV6-82	81		56.8		25	-	32		0	
NC00-15389(R)	81		57.6	+	25	-	31		1	+
USG 3650(RT)	81		56.3		29	+	34	+	2	+
VA01W-310	81		57.5	+	27		33		0	
VA02W-370	81		57.4	+	26	-	30	-	0	
VA02W-596	81		55.9	-	30	+	33		0	
VAN98W-170WS	81		55.7	-	27		34	+	0	
COKER 9184(D)	80		59.4	+	30	+	33		0	
NEUSE(R)	80		59.3	+	30	+	34	+	0	
VA01W-145	80		58.3	+	29	+	31		0	

Table 26, continued. Summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Warsaw, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Barley Yellow Dwarf Virus (0-9)	
VA98W-627WS	80		54.1	-	27		33		1	+
CRAWFORD	79		56.4		25	-	32		0	
V9412(D)	79		56.8		27		34	+	1	+
RENWOOD 3260	78	-	58.3	+	26	-	34	+	1	+
VA01W-99	76	-	56.8		26	-	32		0	
Average	86		56.5		27		32		0	
LSD (0.05)	8		0.6		1		2		1	
C.V.	6		0.6		3		3		148	

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields.
A plus or minus sign indicates a performance significantly above or below the test average.
Fungicide-treated plots received Baytan® and Gaucho® seed treatment, plus Tilt® at heading.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible. There was no significant lodging at this location.

Table 27. Two year summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Warsaw, 2003 and 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Glume Blotch (0-9)	
	(2)		(2)		(2)		(2)		(1)		(1)		(1)		(1)		(1)	
VA97W-24	91	+	57.1		34	+	36	+	0.2		1		1		1		2	
SS 520(R)	91	+	56.6	-	30	-	36	+	0.2		1		0	-	0	-	1	-
SISSON	90	+	57.6		30	-	32	-	0.2		0	-	3	+	0	-	3	+
GA931233E17(D)	90	+	58.6	+	32		37	+	1.8	+	3	+	0	-	0	-	2	
TRIBUTE	90	+	59.4	+	31	-	33		0.3		0	-	0	-	0	-	1	-
VA01W-148	89		57.9	+	33	+	30	-	0.2		0	-	0	-	0	-	3	+
VA99W-176	89		56.7	-	30	-	33		0.2		0	-	0	-	1		1	-
MD71-5	88		57.3		31	-	30	-	0.2		0	-	0	-	1		3	+
SS 560(R)	88		57.5		33	+	33		0.2		2	+	2	+	0	-	2	
PIONEER 26R24(D)	88		57.5		31	-	35	+	0.2		2	+	2	+	0	-	1	-
CHOPTANK	87		58.0	+	31	-	30	-	0.5		0	-	0	-	0	-	3	+
VA97W-375RS	87		57.7	+	31	-	32	-	0.5		0	-	0	-	1		2	
VAN98W-342	87		57.1		31	-	30	-	0.2		0	-	0	-	1		2	
USG 3209(RT)	87		56.6	-	31	-	32	-	0.4		0	-	3	+	0	-	2	
MV5-46	87		58.9	+	31	-	33		0.3		0	-	1		0	-	2	
VA01W-353	86		55.9	-	31	-	32	-	0.2		0	-	1		1		3	+
RENWOOD 3706	86		58.0	+	31	-	31	-	0.2		0	-	0	-	0	-	3	+
SS 550(B)	86		57.3		31	-	32	-	0.2		0	-	2	+	0	-	2	
VA99W-28	86		56.3	-	32		35	+	0.5		0	-	0	-	0	-	1	-
V9212(D)	85		56.8	-	31	-	38	+	0.2		2	+	0	-	1		3	+

Table 27, continued. Two year summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Warsaw, 2003 and 2004 harvest.

Line	Yield (Bu/a) (2)		Test Weight (Lb/bu) (2)		Date Headed (Mar31+) (2)		Height (In) (2)		Lodging (0.2-10) (1)		Powdery Mildew (0-9) (1)		Leaf Rust (0-9) (1)		Barley Yellow Dwarf Virus (0-9) (1)		Glume Blotch (0-9) (1)	
PIONEER 26R58(D)	85		55.6	-	32		32	-	0.2		1		1		0	-	3	+
VA98W-335	85		57.5		33	+	30	-	0.4		0	-	0	-	0	-	3	+
VA00W-526	85		58.4	+	32		31	-	0.2		0	-	0	-	1		2	
FEATHERSTONE 520(RT)	85		58.5	+	31	-	34	+	1.3	+	2	+	1		0	-	2	
VA00W-38	85		55.8	-	31	-	34	+	0.2		2	+	1		0	-	2	
VA00W-286	85		56.8	-	32		32	-	0.2		0	-	1		0	-	1	-
VA01W-112	84		56.3	-	31	-	32	-	0.2		0	-	1		0	-	2	
VA97W-375WS	84		57.1		32		32	-	0.3		0	-	0	-	0	-	2	
VA01W-205	84		57.6		32		31	-	0.2		2	+	0	-	0	-	1	-
VA01W-18	83		57.5		33	+	33		0.2		0	-	0	-	0	-	1	-
VA98W-631	82		55.2	-	33	+	32	-	0.2		3	+	0	-	1		2	
VA01W-145	82		57.9	+	32		32	-	0.2		0	-	0	-	0	-	2	
COKER 9295(D)	81		56.2	-	34	+	34	+	0.2		2	+	0	-	0	-	2	
VA01W-99	81		58.0	+	31	-	34	+	0.2		1		2	+	0	-	1	-
McCORMICK	81		58.4	+	32		31	-	0.2		0	-	0	-	0	-	1	-
MASSEY	79	-	57.7	+	32		39	+	0.3		2	+	5	+	0	-	2	
CRAWFORD	79	-	58.1	+	30	-	34	+	0.7		0	-	0	-	0	-	2	
COKER 9375	79	-	55.0	-	33	+	38	+	0.2		2	+	1		0	-	1	-
COKER 9184(D)	79	-	59.6	+	34	+	33		0.2		3	+	0	-	0	-	1	-
NEUSE(R)	79	-	59.3	+	34	+	33		0.3		0	-	0	-	0	-	1	-
VAN98W-170WS	78	-	56.9	-	30	-	35	+	0.2		1		0	-	0	-	2	
USG 3650(RT)	76	-	56.5	-	34	+	34	+	0.2		1		0	-	2	+	2	
Average	85		57.3		32		33		0.3		1		1		0.3		2	
LSD (0.05)	5		0.4		1		1		0.7		1		1		0.8		1	
C.V.	6		0.7		2		3		135		62		121		149		35	

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields.

The number in parentheses below column headings indicates the number of years on which data are based.

A plus or minus sign indicates a performance significantly above or below the test average.

Fungicide-treated plots received Baytan® and Gaucho® seed treatment, plus Tilt® at heading.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 28. Three year summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Warsaw, 2002, 2003, and 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Glume Blotch (0-9)		Early Height (In)	
	(3)		(3)		(3)		(3)		(2)		(2)		(2)		(2)		(1)		(1)	
SS 520(R)	101	+	56.1	-	26	-	35	+	0.7		1		1		3	+	1	-	8.8	
VA97W-24	101	+	56.6		29	+	35	+	1.2		1		2	+	3	+	2		7.3	
SISSON	99	+	56.9		26	-	31	-	1.2		0	-	4	+	2		3	+	8.7	
SS 560(R)	99	+	57.1		29	+	33	+	1.7		2	+	2	+	3	+	2		6.8	
TRIBUTE	99	+	58.9	+	27	-	32		0.3		0	-	0	-	2		1	-	5.7	-
VA99W-176	97		56.1	-	26	-	33	+	1.7		0	-	2	+	3	+	1	-	8.0	
SS 550(R)	97		56.5	-	27	-	33	+	1.2		0	-	3	+	2		2		7.8	
VA98W-335	97		57.1		29	+	30	-	0.6		0	-	0	-	3	+	3	+	7.0	
PIONEER 26R24(B)	97		57.0		27	-	35	+	0.3		2	+	2	+	1	-	1	-	6.7	
VA00W-526	96		57.7	+	28		31	-	0.3		0	-	1		3	+	2		8.7	
CHOPTANK	96		57.1		27	-	29	-	0.4		0	-	1		2		3	+	7.7	
VAN98W-342	96		56.3	-	27	-	29	-	0.2		0	-	1		3	+	2		7.7	
USG 3209(RT)	95		56.2	-	27	-	31	-	0.5		0	-	2	+	3	+	2		8.8	
VA97W-375WS	95		56.4	-	28		31	-	0.2		0	-	0	-	2		2		6.8	
VA97W-375RS	95		56.9		28		31	-	0.7		0	-	1		2		2		6.7	
VA98W-631	93		54.9	-	29	+	32		0.6		3	+	0	-	2		2		7.0	
RENWOOD 3706	93		57.6	+	27	-	31	-	1.2		0	-	1		3	+	3	+	6.2	-
McCORMICK	91		58.0	+	28		31	-	0.5		0	-	0	-	2		1	-	6.0	-
COKER 9295(D)	90		55.5	-	29	+	34	+	0.2		2	+	1		2		2		8.8	
VA00W-38	89	-	55.2	-	27	-	33	+	3.0	+	2	+	1		2		2		11.5	+
FEATHERSTONE 520(RT)	89	-	57.6	+	28		33	+	3.1	+	1		2	+	3	+	2		8.8	
COKER 9184(D)	87	-	58.7	+	31	+	32		0.6		3	+	1		1	-	1	-	7.0	
NEUSE(R)	86	-	58.2	+	30	+	33	+	1.5		0	-	0	-	1	-	1	-	8.3	
USG 3650 (RT)	86	-	56.5	-	30	+	34	+	0.5		1		1		3	+	2		7.7	
MASSEY	81	-	56.5	-	28		38	+	2.5		2	+	6	+	3	+	2		10.7	+
Average	94		56.9		28		32		1.0		1		1		2		2		7.8	
LSD (0.05)	5		0.4		1		1		1.6		1		1		1		1		1.6	
C.V.	6		0.7		3		3		140		65		70		36		37		12.5	

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields.
The number in parentheses below column headings indicates the number of years on which data are based.
A plus or minus sign indicates a performance significantly above or below the test average.
Fungicide-treated plots received Baytan® and Gaucho® seed treatment, plus Tilt® at heading.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 29. Summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)	
PIONEER 26R15(D)	77	+	55.3	-
VA97W-24	77	+	57.5	+
VA01W-21	77	+	57.7	+
PIONEER 26R24(D)	75	+	56.5	
COKER 9295(D)	74		56.4	
PIONEER 26R58(D)	74		55.2	-
VA02W-398	74		55.5	-
VA02W-683	74		55.3	-
MV8-29	73		57.2	
V9412(D)	73		58.6	+
VA02W-124	73		56.9	
VA00W-526	72		57.1	
VA01W-205	72		56.7	
VA01W-353	72		54.2	-
NC00-15389(R)	72		57.9	+
COKER 9312(D)	72		57.2	
PIONEER 26R12(D)	72		57.9	+
SS 560(R)	72		57.1	
USG 3209(RT)	71		56.6	
CHOPTANK	71		56.7	
VAN98W-170WS	71		56.9	
VA01W-18	71		56.6	
VA01W-112	71		56.4	
COKER 9184(D)	71		59.2	+
SS 8308(R)	71		55.6	-
RACHEL	71		56.3	
MV5-46	71		57.1	
V9212(D)	71		55.5	-
VA98W-627RS	71		56.1	
VA02W-513	71		57.7	+
VA02W-555	71		56.1	
FEATHERSTONE 520(RT)	70		57.5	+
VAN98W-342	70		55.4	-
VA98W-631	70		53.9	-
NC99-13022(R)	70		57.0	
PIONEER XW02M(D)	70		56.2	
McCORMICK	70		56.7	
MD71-5	70		55.5	-
VA00W-366	70		57.0	
VA00W-38	69		55.5	-
VA00W-286	69		56.6	
VA01W-148	69		57.0	
MV27-0187	69		56.2	
SS 8309(R)	69		56.4	
CRAWFORD	69		55.5	-
VA01W-310	69		57.8	+

Table 29, continued. Summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)	
VA02W-519	69		56.3	
VA02W-553	69		57.0	
VA01W-99	68		57.3	+
VA01W-145	68		57.6	+
RENWOOD 3260	68		58.2	+
TRIBUTE	68		58.1	+
COKER 9375	68		54.6	-
VA98W-627WS	68		55.5	-
VA01W-154	68		57.7	+
VA02W-370	68		56.4	
VA99W-28	67		54.0	-
USG 3592(RT)	67		56.7	
NC00-15332(R)	67		56.0	
VA02W-567	67		57.8	+
VA98W-335	66		56.4	
VA97W-375WS	66		56.0	
RENWOOD 3706	66		56.4	
GA931233E17(D)	66		57.2	
VA02W-596	66		55.2	-
MASSEY	65		57.7	+
COKER B970051(D)	65		55.5	-
MV6-82	65		56.7	
SS 8302(R)	65		57.3	+
SS 550(B)	65		56.2	
VA97W-375RS	65		56.2	
SS 520(R)	65		54.9	-
VA99W-176	65		56.0	
USG 3650(RT)	64		56.2	
PAT(R)	64		57.6	+
NEUSE(R)	64		58.9	+
USG 3706(RT)	64		57.2	
SISSON	64		56.5	
VA02W-267	63	-	56.0	
H-84(D)	59	-	56.6	
Average	69		56.6	
LSD (0.05)	6		0.7	
C.V.	6		0.8	

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields.
A plus or minus sign indicates a performance significantly above or below the test average.
Fungicide-treated plots received Baytan® and Gaucho® seed treatment, plus Tilt® at heading.
There was no significant lodging at this location.

Table 30. Two year summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter, 2003 and 2004 harvest.

Line	Yield (Bu/a) (2)		Test Weight (Lb/bu) (2)	
VA97W-24	80	+	57.7	
VA01W-353	79		56.5	-
VA01W-205	78		58.9	+
MV5-46	78		58.7	+
VA00W-526	78		58.1	
PIONEER 26R24(D)	78		57.9	
MD71-5	78		57.8	
SS 550(B)	78		57.7	
TRIBUTE	77		58.9	+
VAN98W-342	77		57.7	
VA01W-112	77		57.4	
V9212(D)	77		57.1	-
FEATHERSTONE 520(RT)	76		58.9	+
CHOPTANK	76		58.4	+
VA97W-375RS	76		57.6	
VA99W-176	76		57.4	
COKER 9375	76		56.2	-
COKER 9184(D)	75		59.6	+
McCORMICK	75		58.5	+
SISSON	75		58.0	
CRAWFORD	75		57.8	
VA00W-286	75		57.7	
SS 560(R)	75		57.6	
USG 3209(RT)	75		57.1	-
SS 520(R)	75		56.9	-
VA98W-631	75		55.5	-
VA01W-99	74		58.4	+
VAN98W-170WS	74		58.3	+
VA97W-375WS	74		57.5	
COKER 9295(D)	74		56.6	-
VA99W-28	74		56.0	-
RENWOOD 3706	73		58.1	
VA01W-148	73		57.9	
VA01W-18	73		57.5	
PIONEER 26R58(D)	73		56.5	-
VA98W-335	72		58.3	+
VA01W-145	72		57.8	
GA931233E17(D)	70	-	58.4	+
VA00W-38	70	-	56.0	-
NEUSE(R)	69	-	59.6	+

Table 30, continued. Two year summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter, 2003 and 2004 harvest.

Line	Yield (Bu/a) (2)		Test Weight (Lb/bu) (2)
USG 3650(RT)	69	-	57.6
MASSEY	67	-	58.1
Average	75		57.7
LSD (0.05)	5		0.5
C.V.	6		0.7

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields.
The number in parentheses below column headings indicates the number of years on which data are based. A plus or minus sign indicates a performance significantly above or below the test average.
Fungicide-treated plots received Baytan® and Gaucho® seed treatment, plus Tilt® at heading.
There was no significant lodging at this location.

Table 31. Three year summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter, 2002, 2003, and 2004 harvest.

Line	Yield (Bu/a) (3)		Test Weight (Lb/bu) (3)		Lodging (0.2-10) (1)		Powdery Mildew (0-9) (3)	
VA97W-375RS	89	+	58.5		1.7		0	-
SISSON	88		58.9		2.5		1	
VA97W-24	88		58.4		0.5		1	
TRIBUTE	88		60.2	+	1.1		0	-
SS 550(R)	88		58.6		0.9		0	-
VA00W-526	87		59.0		6.4	+	0	-
CHOPTANK	87		59.0		0.9		0	-
VA97W-375WS	86		58.4		1.8		0	-
VA98W-335	86		59.2	+	1.3		0	-
SS 560(R)	85		58.1	-	1.1		2	+
SS 520(R)	85		57.8	-	4.4		0	-
USG 3209(RT)	85		58.0	-	2.9		0	-
VAN98W-342	85		58.8		0.9		0	-
VA98W-631	84		56.8	-	1.4		2	+
McCORMICK	84		59.7	+	1.7		0	-
RENWOOD 3706	83		59.0		0.5		1	
FEATHERSTONE 520(RT)	83		59.7	+	2.7		0	-
COKER 9184(D)	82		60.5	+	1.1		2	+
COKER 9295(D)	82		57.7	-	3.9		1	
VA99W-176	82		58.1	-	7.2	+	0	-
PIONEER 26R24(B)	81		58.9		3.8		2	+
USG 3650 (RT)	79	-	58.6		2.5		1	
NEUSE(R)	78	-	60.3	+	2.3		0	-
VA00W-38	74	-	57.0	-	7.5	+	1	
MASSEY	71	-	58.6		6.9	+	1	
Average	84		58.7		2.7		1	
LSD (0.05)	5		0.4		3.2		0.4	
C.V.	7		0.8		71		71	

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields.

The number in parentheses below column headings indicates the number of years on which data are based. A plus or minus sign indicates a performance significantly above or below the test average.

Fungicide-treated plots received Baytan® and Gaucho® seed treatment, plus Tilt® at heading.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 32. Summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter and Warsaw, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Barley Yellow Dwarf Virus (0-9)	
	(2)		(2)		(1)		(1)		(1)	
PIONEER 26R15(D)	87	+	54.9	-	29	+	33		1	+
VA97W-24	87	+	57.2	+	29	+	35	+	1	+
VA02W-398	86	+	55.4	-	26	-	33		0	
PIONEER 26R58(D)	85	+	55.2	-	27		32		0	
RACHEL	83	+	56.2		26	-	34	+	0	
PIONEER 26R24(D)	83	+	56.5		27		34	+	0	
USG 3209(RT)	82		56.4		27		31		0	
SS 560(R)	82		57.2	+	29	+	33		0	
MD71-5	82		55.5	-	27		30	-	1	+
VA01W-21	82		57.6	+	26	-	32		0	
VA02W-555	82		56.1	-	26	-	30	-	0	
VAN98W-342	81		55.3	-	27		30	-	1	+
VA01W-353	81		54.9	-	26	-	31		1	+
SS 8308(R)	81		56.2		27		32		0	
VA01W-148	80		57.0		28	+	29	-	0	
VA99W-176	80		55.8	-	26	-	33		1	+
VA02W-513	80		57.9	+	28	+	31		0	
VA02W-519	80		55.7	-	26	-	32		0	
COKER 9295(D)	79		55.9	-	30	+	34	+	0	
VA00W-286	79		56.5		28	+	32		0	
VA01W-112	79		55.9	-	27		31		0	
COKER 9312(D)	79		57.3	+	27		32		0	
MV27-0187	79		56.1	-	26	-	32		1	+
MV8-29	79		57.5	+	26	-	31		0	
PIONEER XW02M(D)	79		56.2		26	-	29	-	0	
SS 8302(R)	79		56.9		30	+	34	+	1	+
SS 550(B)	79		56.4		26	-	32		0	
SISSON	79		56.6		26	-	32		0	
TRIBUTE	79		58.0	+	27		32		0	
VA02W-683	79		55.3	-	27		31		0	
FEATHERSTONE 520(RT)	78		57.7	+	26	-	34	+	0	
CHOPTANK	78		56.6		27		29	-	0	
VA98W-631	78		54.0	-	28	+	33		1	+
VA00W-526	78		57.5	+	28	+	30	-	1	+
VA01W-18	78		56.9		30	+	33		0	
VA01W-205	78		56.5		28	+	29	-	0	
VA97W-375RS	78		56.3		27		32		1	+
SS 520(R)	78		55.1	-	26	-	35	+	0	
RENWOOD 3706	78		56.7		27		30	-	0	
MV5-46	78		57.4	+	26	-	32		0	
GA931233E17(D)	78		57.4	+	28	+	38	+	0	
V9212(D)	78		55.2	-	28	+	37	+	1	+
VA98W-627RS	78		56.4		26	-	32		0	
VA00W-366	78		56.9		27		30	-	0	

Table 32, continued. Summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter and Warsaw, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Barley Yellow Dwarf Virus (0-9)	
	(2)		(2)		(1)		(1)		(1)	
VA02W-124	78		56.7		28	+	33		0	
VA98W-335	77		56.4		28	+	30	-	0	
VA00W-38	77		55.2	-	27		33		0	
USG 3592(RT)	77		57.0		28	+	35	+	0	
NC99-13022(R)	77		56.8		28	+	32		0	
H-84(D)	77		56.8		28	+	33		1	+
PIONEER 26R12(D)	77		58.0	+	28	+	33		0	
SS 8309(R)	77		56.1	-	29	+	35	+	1	+
McCORMICK	77		56.8		27		31		0	
VA01W-154	77		58.1	+	28	+	33		0	
VA02W-553	77		57.1	+	26	-	34	+	0	
VAN98W-170WS	76		56.3		27		34	+	0	
VA99W-28	76		54.6	-	29	+	34	+	0	
NC00-15389(R)	76		57.7	+	25	-	31		1	+
V9412(D)	76		57.7	+	27		34	+	1	+
VA02W-567	76		58.0	+	26	-	31		0	
COKER 9184(D)	75		59.3	+	30	+	33		0	
NC00-15332(R)	75		56.2		29	+	35	+	0	
VA97W-375WS	75		55.6	-	28	+	31		0	
COKER 9375	75		54.5	-	29	+	37	+	0	
VA01W-310	75		57.7	+	27		33		0	
MASSEY	74		57.3	+	28	+	39	+	0	
VA01W-145	74		58.0	+	29	+	31		0	
PAT(R)	74		57.4	+	34	+	36	+	0	
USG 3706(RT)	74		56.9		27		30	-	0	
COKER B970051(D)	74		55.7	-	31	+	31		0	
CRAWFORD	74		56.0	-	25	-	32		0	
VA98W-627WS	74		54.8	-	27		33		1	+
VA02W-370	74		56.9		26	-	30	-	0	
VA02W-596	74		55.6	-	30	+	33		0	
MV6-82	73	-	56.7		25	-	32		0	
RENWOOD 3260	73	-	58.2	+	26	-	34	+	1	+
VA02W-267	73	-	55.9	-	26	-	30	-	0	
USG 3650(RT)	72	-	56.2		29	+	34	+	2	+
VA01W-99	72	-	57.1	+	26	-	32		0	
NEUSE(R)	72	-	59.1	+	30	+	34	+	0	
Average	78		56.6		27		32		0	
LSD (0.05)	5		0.5		1		2		1	
C.V.	6		0.7		3		3		148	

Released cultivars are shown in bold print.

Varieties are ordered by descending yield averages. A plus or minus sign indicates a performance significantly above or below the test average. The number in parentheses below column headings indicates the number of locations on which data are based.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible. There was no significant lodging at either location.

Table 33. Two year summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter and Warsaw, 2003 and 2004 harvest.

Line	Yield (Bu/a) (4)	Test Weight (Lb/bu) (4)	Date Headed (Mar31+) (2)	Height (In) (2)	Lodging (0.2-10) (1)	Powdery Mildew (0-9) (2)	Leaf Rust (0-9) (1)	Barley Yellow Dwarf Virus (0-9) (1)	Glume Blotch (0-9) (1)
VA97W-24	85 +	57.4	34 +	36 +	0.2	1 +	1	1 +	2
TRIBUTE	84 +	59.1 +	31 -	33	0.3	0 -	0 -	0	1 -
MD71-5	83	57.5	31 -	30 -	0.2	0 -	0 -	1 +	3 +
PIONEER 26R24(D)	83	57.7	31 -	35 +	0.2	1 +	2 +	0	1 -
SS 520(R)	83	56.7 -	30 -	36 +	0.2	0 -	0 -	0	1 -
VA01W-353	82	56.2 -	31 -	32 -	0.2	0 -	1	1 +	3 +
SISSON	82	57.8	30 -	32 -	0.2	0 -	3 +	0	3 +
VA01W-148	82	57.9 +	33 +	30 -	0.2	0 -	0 -	0	3 +
VA00W-526	82	58.3 +	32	31 -	0.2	0 -	0 -	1 +	2
VAN98W-342	82	57.4	31 -	30 -	0.2	0 -	0 -	1 +	2
SS 550(B)	82	57.5	31 -	32 -	0.2	0 -	2 +	0	2
MV5-46	82	58.8 +	31 -	33	0.3	0 -	1	0	2
VA99W-176	82	57.0 -	30 -	33	0.2	0 -	0 -	1 +	1 -
V9212(D)	81	56.9 -	31 -	38 +	0.2	1 +	0 -	1 +	3 +
CHOPTANK	81	58.2 +	31 -	30 -	0.5	0 -	0 -	0	3 +
VA97W-375RS	81	57.7	31 -	32 -	0.5	0 -	0 -	1 +	2
USG 3209(RT)	81	56.8 -	31 -	32 -	0.4	0 -	3 +	0	2
SS 560(R)	81	57.5	33 +	33	0.2	1 +	2 +	0	2
VA01W-205	81	58.2 +	32	31 -	0.2	1 +	0 -	0	1 -
FEATHERSTONE 520(RT)	80	58.7 +	31 -	34 +	1.3 +	1 +	1	0	2
VA01W-112	80	56.9 -	31 -	32 -	0.2	0 -	1	0	2
GA931233E17(D)	80	58.5 +	32	37 +	1.8 +	1 +	0 -	0	2
VA00W-286	80	57.3	32	32 -	0.2	0 -	1	0	1 -
VA99W-28	80	56.2 -	32	35 +	0.5	0 -	0 -	0	1 -
PIONEER 26R58(D)	79	56.0 -	32	32 -	0.2	1 +	1	0	3 +
VA98W-335	79	57.9 +	33 +	30 -	0.4	0 -	0 -	0	3 +
RENWOOD 3706	79	58.0 +	31 -	31 -	0.2	0 -	0 -	0	3 +
VA97W-375WS	79	57.3	32	32 -	0.3	0 -	0 -	0	2
VA98W-631	78	55.3 -	33 +	32 -	0.2	1 +	0 -	1 +	2
VA00W-38	78	55.9 -	31 -	34 +	0.2	1 +	1	0	2
COKER 9295(D)	78	56.4 -	34 +	34 +	0.2	1 +	0 -	0	2
VA01W-99	78	58.2 +	31 -	34 +	0.2	0 -	2 +	0	1 -
COKER 9375	78	55.6 -	33 +	38 +	0.2	1 +	1	0	1 -
VA01W-18	78	57.5	33 +	33	0.2	0 -	0 -	0	1 -
McCORMICK	78	58.5 +	32	31 -	0.2	0 -	0 -	0	1 -

Table 33, continued. Two year summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter and Warsaw, 2003 and 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)	Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Glume Blotch (0-9)	
	(4)		(4)		(2)		(2)		(1)	(2)		(1)		(1)		(1)	
CRAWFORD	77		58.0	+	30	-	34	+	0.7	0	-	0	-	0		2	
VA01W-145	77		57.8		32		32	-	0.2	0	-	0	-	0		2	
COKER 9184(D)	77		59.6	+	34	+	33		0.2	1	+	0	-	0		1	-
VAN98W-170WS	76	-	57.6		30	-	35	+	0.2	1	+	0	-	0		2	
NEUSE(R)	74	-	59.4	+	34	+	33		0.3	0	-	0	-	0		1	-
USG 3650(RT)	73	-	57.0	-	34	+	34	+	0.2	0	-	0	-	2	+	2	
MASSEY	73	-	57.9	+	32		39	+	0.3	1	+	5	+	0		2	
Average	80		57.5		32		33		0.3	0.4		1		0.3		2	
LSD (0.05)	4		0.4		1		1		0.7	0.4		1		0.8		1	
C.V.	6		0.8		2		3		135	87		121		149		35	

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields. The number in parentheses below column headings indicates the number of location-years on which data are based. A plus or minus sign indicates a performance significantly above or below the test average.

Belgian Lodging Scale=Area X Intensity X 0.2. Area=1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity=1-5, where 1 is wheat standing upright and 5 is wheat totally flat. The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 34. Three year summary of performance of entries using seed treatment (Baytan® and Gaucho®) and foliar fungicide (Tilt®) in the Virginia Tech Wheat Test at Painter and Warsaw, 2002, 2003, and 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Glume Blotch (0-9)		Early Height (In)	
	(6)		(6)		(3)		(3)		(3)		(5)		(4)		(2)		(1)		(1)	
VA97W-24	94	+	57.5	-	29	+	35	+	1.0		1		2	+	3	+	2		7.3	
TRIBUTE	94	+	59.6	+	27	-	32		0.6		0	-	0	-	2		1	-	5.7	-
SS 520(R)	93	+	57.0	-	26	-	35	+	1.9		1		1		3	+	1	-	8.8	
SISSON	93	+	57.9		26	-	31	-	1.6		0	-	4	+	2		3	+	8.7	
SS 550(R)	93	+	57.5	-	27	-	33	+	1.1		0	-	3	+	2		2		7.8	
SS 560(R)	92		57.6		29	+	33	+	1.5		2	+	2	+	3	+	2		6.8	
VA97W-375RS	92		57.7		28		31	-	1.0		0	-	1		2		2		6.7	
VA00W-526	91		58.4	+	28		31	-	2.3		0	-	1		3	+	2		8.7	
CHOPTANK	91		58.1	+	27	-	29	-	0.6		0	-	1		2		3	+	7.7	
VAN98W-342	91		57.6		27	-	29	-	0.5		0	-	1		3	+	2		7.7	
VA98W-335	91		58.1	+	29	+	30	-	0.8		0	-	0	-	3	+	3	+	7.0	
VA97W-375WS	91		57.4	-	28		31	-	0.8		0	-	0	-	2		2		6.8	
USG 3209(RT)	90		57.1	-	27	-	31	-	1.3		0	-	2	+	3	+	2		8.8	
VA99W-176	90		57.0	-	26	-	33	+	3.5	+	0	-	2	+	3	+	1	-	8.0	
PIONEER 26R24(B)	90		58.0		27	-	35	+	1.5		2	+	2	+	1	-	1	-	6.7	
VA98W-631	88		55.8	-	29	+	32		0.9		3	+	0	-	2		2		7.0	
RENWOOD 3706	88		58.3	+	27	-	31	-	1.0		0	-	1		3	+	3	+	6.2	-
COKER 9295(D)	87		56.5	-	29	+	34	+	1.4		2	+	1		2		2		8.8	
McCORMICK	87		58.9	+	28		31	-	0.9		0	-	0	-	2		1	-	6.0	-
FEATHERSTONE 520(RT)	86		58.6	+	28		33	+	3.0	+	1		2	+	3	+	2		8.8	
COKER 9184(D)	85	-	59.6	+	31	+	32		0.8		2	+	1		1	-	1	-	7.0	
VA00W-38	82	-	56.1	-	27	-	33	+	4.5	+	1		1		2		2		11.5	+
NEUSE(R)	82	-	59.3	+	30	+	33	+	1.8		0	-	0	-	1	-	1	-	8.3	
USG 3650 (RT)	82	-	57.5	-	30	+	34	+	1.2		1		1		3	+	2		7.7	
MASSEY	76	-	57.5	-	28		38	+	4.0	+	1		6	+	3	+	2		10.7	+
Average	89		57.8		28		32		1.6		1		1		2		2		7.8	
LSD (0.05)	4		0.3		1		1		1.5		0.4		1		1		1		1.6	
C.V.	7		0.8		3		3		105		68		70		36		37		12.5	

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields.

The number in parentheses below column headings indicates the number of location-years on which data are based.

A plus or minus sign indicates a performance significantly above or below the test average.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

SECTION 4 - WHEAT PLANTED NO-TILL INTO CORN STUBBLE

Wheat was planted no-till into corn stubble at the Eastern Virginia AREC near Warsaw, Virginia. Cooperator Charles Sanford harvested the corn and shredded the stalks. Preplant fertilizer of 30-80-100-5 and Gramaxone Extra® at 1.5 pints per acre was applied October 14, 2003. Lime was applied at 1.0 ton per acre and the wheat varieties were planted on October 17, 2003 with a Hege plot drill at 30 seeds/row. Finesse ® herbicide was applied at 0.4 ounces per acre on Dec. 13, 2003. Nitrogen was applied at 25 pounds per acre as 15-0-0 on Dec. 20, 2003, 50 pounds per acre as 15-0-0 on Feb. 17, 2004, and 60 pounds per acre as 24-0-0-3 on Mar. 30, 2004. Warrior T ® insecticide was applied on May 11, 2004 at a rate of 2.56 ounces per acre. Plots were harvested on June 15, 2004.

An acceptable stand was obtained. Due to sustained cold temperatures in late fall and winter, tillering was slightly less than normal going into early spring. The mean yield for the test was 59 bushels per acre and as was the case with many wheat fields this year, grain yields were 10-15% lower than expected based on late spring tiller and spike numbers. Ten of the 16 varieties that had yields significantly above average also had heading dates that were later than average. Only three were earlier. This is likely explained by increased moisture availability to the later varieties under the no-tillage production regime. Top varieties of wheat when planted without tillage into corn residue were VA97-W24, SS 560, GA931233E17, VA99W-176, Pioneer 26R15, USG 3592, Featherstone 520, USG 3209, and SS 8302. All of these varieties yielded significantly more than the mean for the test. Most also did well in the conventional tillage tests. Long term, it will be beneficial in no-tillage and conventional tillage when effective Fusarium resistance is incorporated into more varieties. Tribute, McCormick, Roane, and Neuse have some resistance to scab spread in the head.

Table 35. Summary of performance of entries in the Virginia Tech No-tillage Wheat Test at Warsaw, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Barley Yellow Dwarf Virus (0-9)	
VA97W-24	70	+	55.1		32	+	33	+	0.2		1	
SS 560(R)	69	+	55.8	+	32	+	32		0.2		2	+
GA931233E17(D)	69	+	56.3	+	31	+	36	+	1.2	+	1	
VAN98W-342	68	+	53.6	-	29	-	29	-	0.2		1	
VA99W-176	68	+	53.6	-	29	-	31		0.2		1	
VA02W-513	68	+	56.1	+	30		30		0.2		1	
PIONEER 26R15(D)	67	+	53.4	-	31	+	33	+	0.2		1	
USG 3592(RT)	66	+	55.5		32	+	35	+	0.2		1	
NC00-15332(R)	66	+	54.8		32	+	34	+	0.2		1	
PIONEER XW02M(D)	66	+	55.4		30		29	-	0.2		1	
VA00W-366	66	+	55.2		30		30		0.2		2	+
FEATHERSTONE 520(RT)	65	+	56.0	+	30		32		0.2		1	
USG 3209(RT)	65	+	55.0		31	+	31		0.2		1	
NC99-13022(R)	65	+	53.4	-	32	+	32		0.2		1	
SS 8302(R)	65	+	55.5		32	+	34	+	0.2		1	
VA02W-596	65	+	54.6		32	+	31		0.2		1	
CHOPTANK	64		54.9		29	-	29	-	0.2		3	+
VA98W-335	64		55.6		31	+	30		0.2		2	+
H-84(D)	64		55.9	+	30		32		0.2		3	+
SS 550(B)	64		54.5		30		31		0.2		2	+
VA01W-310	64		55.6		30		33	+	0.2		1	
VA02W-124	64		54.7		31	+	33	+	0.2		2	+
VA00W-38	63		53.4	-	32	+	31		0.2		2	+
VA99W-28	63		53.7	-	30		32		0.2		1	
COKER B970051(D)	63		55.0		33	+	31		0.2		1	
SS 520(R)	63		53.5	-	27	-	32		0.2		2	+
RENWOOD 3706	63		55.3		31	+	29	-	0.2		2	+
MV6-82	62		55.3		27	-	31		0.2		1	
MD71-5	62		53.4	-	29	-	29	-	0.2		2	+
USG 3650(RT)	61		54.9		32	+	34	+	0.2		1	
VA00W-286	61		55.4		31	+	31		0.2		1	
VA01W-18	61		55.6		32	+	31		0.2		1	
USG 3706(RT)	61		54.9		31	+	30		0.2		1	
SS 8308(R)	61		55.4		30		32		0.2		1	
PIONEER 26R24(D)	61		54.2	-	30		33	+	0.2		1	
McCORMICK	61		55.9	+	30		30		0.2		1	
PIONEER 26R58(D)	61		53.9	-	30		30		0.2		2	+
VA00W-526	60		55.3		32	+	30		0.2		2	+
VA01W-205	60		55.2		30		29	-	0.2		1	
MV27-0187	60		54.4		29	-	31		0.2		3	+
VA02W-555	60		54.5		30		30		0.2		1	
VA01W-99	59		56.5	+	28	-	32		0.2		1	
VA01W-112	59		53.4	-	31	+	31		0.2		1	
CRAWFORD	59		54.7		26	-	35	+	0.2		1	
VA01W-154	59		56.5	+	30		33	+	0.2		1	

Table 35, continued. Summary of performance of entries in the Virginia Tech No-tillage Wheat Test at Warsaw, 2004 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Barley Yellow Dwarf Virus (0-9)	
VA02W-519	59		53.1	-	29	-	30		0.2		1	
VA02W-567	59		56.7	+	29	-	31		0.2		1	
VA02W-683	59		53.4	-	28	-	30		0.2		1	
COKER 9295(D)	58		55.4		32	+	34	+	0.2		2	+
VAN98W-170WS	58		53.9	-	29	-	32		0.2		1	
SISSON	58		54.4		28	-	31		0.2		1	
V9212(D)	58		55.1		30		35	+	0.2		1	
VA98W-627WS	58		53.8	-	31	+	31		0.2		2	+
VA98W-631	57		51.6	-	32	+	31		0.2		2	+
VA01W-145	57		55.5		30		30		0.2		1	
PAT(R)	57		55.8	+	34	+	34	+	0.2		1	
MV8-29	57		56.1	+	29	-	32		0.2		1	
RACHEL	57		54.4		28	-	32		0.2		2	+
VA97W-375RS	57		54.8		30		30		0.2		2	+
VA97W-375WS	57		53.4	-	30		30		0.2		2	+
VA01W-21	57		56.4	+	28	-	32		0.2		1	
VA02W-267	57		53.9	-	27	-	31		0.2		1	
VA02W-553	57		55.7		29	-	33	+	0.2		2	+
VA01W-353	56		54.1	-	31	+	30		0.2		1	
TRIBUTE	56		56.2	+	30		29	-	0.2		1	
VA01W-148	55		55.5		32	+	29	-	0.2		1	
MASSEY	54		56.0	+	31	+	38	+	0.2		2	+
MV5-46	54		56.2	+	29	-	32		0.2		1	
VA02W-370	54		55.9	+	27	-	30		0.2		1	
VA02W-398	53	-	53.0	-	28	-	31		0.2		2	+
COKER 9184(D)	52	-	58.7	+	32	+	32		0.2		1	
RENWOOD 3260	52	-	56.1	+	29	-	33	+	0.2		2	+
COKER 9375	52	-	52.6	-	31	+	35	+	0.2		2	+
VA98W-627RS	51	-	55.0		30		31		0.2		1	
NC00-15389(R)	50	-	56.1	+	27	-	32		0.2		2	+
PIONEER 26R12(D)	49	-	56.5	+	32	+	33	+	0.2		1	
NEUSE(R)	48	-	57.5	+	32	+	32		0.2		2	+
COKER 9312(D)	48	-	55.6		29	-	31		0.2		1	
V9412(D)	48	-	55.6		29	-	32		0.2		2	+
SS 8309(R)	44	-	54.3		31	+	34	+	0.2		1	
Average	59		55.0		30		31		0.2		1	
LSD (0.05)	6		0.8		1		2		0.3		1	
C.V.	7		1.0		3		4		105.2		47	

Released cultivars are shown in bold print. Varieties are ordered by descending yield averages.

A plus or minus sign indicates a performance significantly above or below the test average.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 36. Two year average summary of performance of entries in the Virginia Tech No-tillage Wheat Test at Warsaw, 2003 and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)	
	(2)		(2)		(2)		(2)		(2)		(1)		(1)		(1)	
VAN98W-342	78	+	56.1		33		28	-	0.2		0	-	1		1	
VA99W-176	77	+	55.1	-	33		31		0.5		0	-	1		1	
MD71-5	75	+	56.0		33		29	-	0.2		0	-	0	-	2	+
PIONEER 26R24(D)	74	+	55.9		34		34	+	0.6		1		1		1	
VA98W-335	73	+	57.2	+	35		29	-	0.2		0	-	0	-	2	+
McCORMICK	73	+	58.2	+	33		30	-	0.2		0	-	0	-	1	
SS 550(B)	72		55.8		34		30	-	1.4	+	1		1		2	+
RENWOOD 3706	72		56.6		34		29	-	0.2		0	-	0	-	2	+
VA97W-24	72		56.1		36	+	33	+	0.5		1		1		1	
VA99W-28	72		55.2	-	34		32	+	1.9	+	2	+	0	-	1	
GA931233E17(D)	72		57.4	+	34		35	+	2.3	+	1		0	-	1	
CHOPTANK	71		56.4		33		28	-	0.2		0	-	0	-	3	+
SS 560(R)	71		55.9		35		30	-	0.2		1		1		2	+
USG 3209(RT)	71		56.1		35		30	-	0.2		0	-	2	+	1	
PIONEER 26R58(D)	70		54.6	-	34		31		0.2		1		1		2	+
SS 520(R)	69		55.3	-	31	-	33	+	1.3	+	1		1		2	+
SISSON	69		55.9		32	-	30	-	0.7		1		4	+	1	
VA01W-112	69		55.2	-	34		30	-	0.3		0	-	1		1	
CRAWFORD	69		56.4		31	-	33	+	1.4	+	0	-	0	-	1	
TRIBUTE	69		58.4	+	34		30	-	0.2		0	-	0	-	1	
MV5-46	68		57.9	+	33		31		0.2		0	-	2	+	1	
V9212(D)	68		56.3		33		36	+	0.4		2	+	0	-	1	
VA01W-18	68		56.4		35		30	-	0.2		0	-	0	-	1	
VA00W-38	67		54.4	-	35		30	-	0.4		1		0	-	2	+
VA00W-286	67		55.7		35		30	-	0.3		1		0	-	1	
VA01W-145	67		56.5		34		29	-	0.3		0	-	0	-	1	
VA97W-375RS	66		56.0		34		28	-	0.4		0	-	1		2	+
VA00W-526	66		56.8	+	35		29	-	0.2		0	-	0	-	2	+
FEATHERSTONE 520(RT)	66		57.1	+	34		32	+	1.2		1		1		1	
VA01W-353	66		55.2	-	34		29	-	0.2		0	-	1		1	
VAN98W-170WS	66		55.7		33		32	+	1.1		2	+	0	-	1	
VA98W-631	65		53.0	-	35		30	-	0.2		1		0	-	2	+
VA01W-99	65		57.5	+	33		32	+	0.2		0	-	1		1	
VA01W-205	65		56.3		34		28	-	0.2		2	+	0	-	1	
VA01W-148	64		56.6		36	+	28	-	0.2		1		0	-	1	
VA97W-375WS	63	-	55.0	-	33		28	-	0.2		0	-	0	-	2	+
USG 3650(RT)	63	-	55.5	-	31	-	32	+	0.2		0	-	1		1	
COKER 9295(D)	62	-	55.5	-	36	+	33	+	0.2		3	+	0	-	2	+
COKER 9184(D)	62	-	59.2	+	36	+	30	-	0.2		2	+	1		1	
COKER 9375	61	-	53.9	-	35		36	+	0.2		3	+	1		2	+

Table 36, continued. Two year average summary of performance of entries in the Virginia Tech No-tillage Wheat Test at Warsaw, 2003 and 2004 harvests.

Line	Yield (Bu/a) (2)		Test Weight (Lb/bu) (2)		Date Headed (Mar31+) (2)		Height (In) (2)		Lodging (0.2-10) (2)		Powdery Mildew (0-9) (1)		Leaf Rust (0-9) (1)		Barley Yellow Dwarf Virus (0-9) (1)	
NEUSE(R)	60	-	58.8	+	35		31		0.5		0	-	0	-	2	+
MASSEY	59	-	56.7		35		37	+	1.1		2	+	4	+	2	+
Average	68		56.2		34		31		0.5		1		1		1	
LSD (0.05)	5		0.6		2		1		0.8		1		1		1	
C.V.	7		0.9		7		4		157		86		94		48	

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields.
The number in parentheses below column headings indicates the number of years on which data are based. A plus or minus sign indicates a performance significantly above or below the test average.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 37. Three year average summary of performance of entries in the Virginia Tech No-tillage Wheat Test at Warsaw, 2002, 2003, and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)		Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Freeze Damage (1-5)
	(3)		(3)		(3)		(3)		(3)		(2)		(2)		(2)		(1)
VA97W-24	84	+	55.4		31	+	32	+	1.0		1		3		3		2
VA99W-176	82	+	54.2	-	28		31		0.9		0	-	4	+	4	+	2
McCORMICK	82	+	57.4	+	29		30		1.3		0	-	1	-	2	-	1
SS 550(R)	81	+	54.8		29		30		1.4		1		4	+	3		3
VAN98W-342	81	+	54.8		29		28	-	0.2		0	-	3		4	+	1
TRIBUTE	81	+	58.0	+	29		29	-	0.3		0	-	1	-	2	-	1
SS 560(R)	80	+	55.3		31	+	30		0.2		1		4	+	4	+	2
VA98W-335	80	+	56.1	+	30		28	-	0.3		0	-	2	-	4	+	2
VA00W-526	80	+	56.2	+	30		29	-	0.5		0	-	2	-	4	+	1
RENWOOD 3706	79	+	55.7		29		29	-	0.2		0	-	2	-	5	+	2
PIONEER 26R24(B)	79	+	54.9		29		32	+	1.0		1		4	+	3		2
SS 520(R)	77		54.4	-	27	-	33	+	0.9		1		3		5	+	2
SISSON	76		54.6	-	27	-	29	-	0.7		1		5	+	3		2
CHOPTANK	75		55.3		28		27	-	0.2		0	-	3		5	+	2
USG 3650(RT)	75		55.0		27	-	32	+	0.7		0	-	4	+	4	+	2
USG 3209(RT)	74		54.8		30		29	-	0.5		1		3		3		4
VA97W-375RS	74		54.7	-	29		28	-	0.8		0	-	3		3		2
VA97W-375WS	73		54.4	-	29		27	-	0.3		0	-	1	-	3		2
VA00W-38	72		54.0	-	30		30		1.6	+	1		2	-	3		3
VA98W-631	72		52.4	-	31	+	29	-	0.2		2	+	1	-	3		3
FEATHERSTONE 520(RT)	69	-	55.7		30		31	+	1.3		1		4	+	3		4
COKER 9295(D)	67	-	54.0	-	31	+	32	+	0.3		4	+	1	-	4	+	3
COKER 9184(D)	67	-	57.7	+	31	+	30		0.2		2	+	2	-	2	-	2
NEUSE(R)	66	-	57.0	+	31	+	31	+	0.4		0	-	1	-	3		2
MASSEY	59	-	54.7	-	30		35	+	2.9	+	2	+	6	+	4	+	4
Average	75		55.3		29		30		0.7		1		3		3		2
LSD (0.05)	4		0.6		2		1		0.8		1		1		1		---
C.V.	7		1.3		8		4		137		66		47		29		---

Released cultivars are shown in bold print. Varieties are ordered by descending treated yields.

The number in parentheses below column headings indicates the number of years on which data are based. A plus or minus sign indicates a performance significantly above or below the test average.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

The freeze damage ratings 1-5 are 1=no damage and 5=all early tillers killed. Freeze damage ratings were performed on one replication of plots in 2002.

Table 38. Yield performance (bushels/acre) of entries in the Virginia Tech Triticale Test, 2004 harvest.

Line	Painter	Warsaw	Holland	Blackstone	Orange	Valley	Blacksburg	Average
TRICAL 2205	62	60	60	72	88	64	72	68
TRICAL 2115	65	65	52	68	84	64	76	68
RSI 42203	58	51 -	59	71	78	58 -	72	64 -
Average	62	59	57	70	83	62	73	67
LSD (0.05)	8	7	12	4	6	3	10	2
C.V.	8	7	13	3	4	3	7	7

Yields were calculated using 60 lb/bu.
Varieties are ordered by descending statewide yield averages.
A plus or minus sign indicates a performance significantly above or below the test average.

Table 39. Summary of performance of entries in the Virginia Tech Triticale Test, 2004 harvest.

Line	Yield (Bu/acre)	Test Weight (Lb/bu)	Heading Date (Mar31+)	Height (Inches)	Lodging (0.2-10)	Powdery Mildew (0-9)	Barley Yellow Dwarf Virus (0-9)
	(7)	(7)	(3)	(3)	(1)	(1)	(1)
TRICAL 2205	68	51.5	28	40	1.0	0	2
TRICAL 2115	68	51.2	28	38 -	0.5	0	1 -
RSI 42203	64 -	50.9	28	42 +	3.7	0	3 +
Average	67	51.2	28	40	1.7	0	2
LSD (0.05)	2	0.5	0	1	2.4	0	1
C.V.	7	1.6	1	2	83	346	29

Yields were calculated using 60 lb/bu.
Varieties are ordered by descending statewide yield averages.
A plus or minus sign indicates a performance significantly above or below the test average.
The number in parentheses below column headings indicates the number of locations on which data are based.
Belgian Lodging Scale = Area X Intensity X 0.2. Area = 1-10, where 1 is triticale unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is triticale standing upright and 5 is triticale totally flat.
The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 40. Two year average summary of performance of all entries in the Virginia Tech Triticale Tests, 2003 and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)	Powdery Mildew (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)	
	(12)		(12)		(6)		(6)		(4)	(2)		(1)		(1)	
TRICAL 2205	65		50.2		32	+	40	+	0.7	1	+	0		2	+
TRICAL 2115	63		49.3	-	29		38	-	0.3	0	-	0		1	
Average	64		49.8		30		39		0.5	0		0		1	
LSD (0.05)	2		0.5		0.4		1		0.6	1		0		1	
C.V.	7		2.2		2		3		174	163		---		33	

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately. The number in parentheses below column headings indicates the number of location-years on which data are based. The 0-9 ratings indicate a genotype's response to disease, where 0=highly resistant and 9=highly susceptible.
Belgian Lodging Scale=Area X Intensity X 0.2. Area=1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity=1-5, where 1 is wheat standing upright and 5 is wheat totally flat.

Table 41. Three year average summary of performance of all entries in the Virginia Tech Triticale Tests, 2002, 2003, and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Mar31+)		Height (In)		Lodging (0.2-10)	Powdery Mildew (0-9)		Leaf Rust (0-9)	Barley Yellow Dwarf Virus (0-9)		Early Height (In)	
	(18)		(17)		(10)		(10)		(8)	(2)		(1)	(1)		(1)	
TRICAL 2205	75	+	50.0	+	27	+	39	+	0.6	1	+	0	2	+	8.4	
TRICAL 2115	71	-	49.3		25	-	37	-	0.3	0	-	0	1		8.3	
Average	73		49.6		26		38		0.4	0		0	1		8.3	
LSD (0.05)	2		0.4		0.3		1		0.3	1		0	1		2.1	
C.V.	7		2.1		3		3		152	163		---	33		11.2	

Varieties are ordered by descending statewide yield averages. A plus or minus sign indicates a performance significantly above or below the test average, where hulled and hulless lines have been statistically analyzed separately. The number in parentheses below column headings indicates the number of location-years on which data are based. The 0-9 ratings indicate a genotype's response to disease, where 0=highly resistant and 9=highly susceptible.
Belgian Lodging Scale=Area X Intensity X 0.2. Area=1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity=1-5, where 1 is wheat standing upright and 5 is wheat totally flat.
The freeze damage ratings 1-5 are 1=no damage and 5=all early tillers killed. Freeze damage ratings were performed on one replication of plots in 2002.

SECTION 6 - MILLING AND BAKING QUALITY

Milling and baking quality of wheat lines grown in the 2002-2003 Virginia State Wheat Test were assessed by the USDA-ARS Soft Wheat Quality Laboratory (SWQL) in Wooster, Ohio (Table 42). Quality evaluations were conducted using 3000 gram seed samples from wheat lines grown at the Painter, VA test site. The data presented here are for a single location and, therefore, are not a definitive measure of a given wheat line's milling and baking quality. Quality varies from location to location and from year to year; therefore, data from multiple years and locations are needed to accurately define quality of a given wheat line.

Milling and baking quality of wheat lines were compared to that of the local check cultivar Sisson. On the basis of six independent quality evaluations conducted by the SWQL, Sisson ranked 215 out of 700 cultivars for milling quality and has better than average milling qualities. Sisson has weak protein gluten strength and pastry baking quality is below average but acceptable. Lines receiving milling and baking scores of "A" have average (numeric score = 100) or better than average (scores > 100) quality compared with Sisson. Because Sisson is rather lenient as a quality standard, wheat lines with scores below those of Sisson, particularly for baking quality may have questionable quality for pastry products. For comparison, Neuse has excellent milling and pastry baking quality and ranks 4th out of 700 cultivars on the basis of three independent quality evaluations by the SWQL.

Milling quality scores of released varieties ranged from a high of 110 for Neuse to a low of 77.6 for USG 3209 with six released varieties and five experimental lines having better milling quality than Sisson (score of 100). Flour yields ranged from a high of 79.9% for Neuse to a low of 77.0% for Pioneer 26R24, compared to 78.0% for Sisson. Pastry baking quality scores of released varieties ranged from a high of 108.3 for Coker 9184 to a low of 73.4 for USG 3209 with seven released varieties and four experimental lines having similar or better baking quality than Sisson (score of 100). Cookie diameters of released varieties were lower than normal and ranged from 16.50 cm to 17.31 cm, compared to 16.76 cm for Sisson.

Flour protein concentration was higher than normal and varied from 8.63% for SS 520 to 11.13% for Neuse, compared with 10.42% for Sisson. Protein quality, specifically gluten strength, based on Lactic Acid Solvent Retention Capacity varied among released varieties from a high of 110.2 for Pioneer 26R24 to a low of 61.8 for VA99W-176, compared to 83.1 for the weak gluten check variety Sisson. Four experimental lines had scores of 115 or higher, thus indicating stronger gluten strength. Lines having lower Lactic Acid scores such as Sisson likely would produce a dough having weak gluten strength and more suitable for pastry products, while lines having higher Lactic Acid scores such as Pioneer 26R24 would produce a dough having stronger gluten strength and more suitable for cracker or certain bread products.

Table 42. Milling and baking quality of entries in the Virginia Tech Wheat Test based on evaluations of the 2003 harvest.

LINE	MILLABILITY		MILLING QUALITY SCORE		BAKING QUALITY SCORE		STRAIGHT GRADE FLOUR YIELD		SOFTNESS ENDOSPERM SEPARATION INDEX		FLOUR PROTEIN %		ALKALINE WATER RETENTION CAPACITY %		COOKIE DIAMETER CM		ADJ. LACTIC ACID
STANDARD=SISSON	117.37		100.0	A	100.0	A	78.00		9.30		10.42		57.2		16.76		72.89
BENCHMARK	114.31		86.0	D	110.0	A	76.60	Q	10.40	Q	8.20		51.3		18.35		93.77
Released Varieties																	
NEUSE(R)	128.52		109.7	A	99.3	B	79.90		7.20		11.13	*	57.3		17.23		76.79
RENWOOD3706	126.28		100.3	A	99.7	B	78.00		8.90		10.50		54.2		17.17		84.26
VA97W-24	122.28		106.1	A	102.9	A	78.90		7.70		10.47		55.6		16.90		105.91
USG 3650(RT)	120.21		109.1	A	106.6	A	78.70		8.10		9.01		56.9		17.31		104.75
COKER9184(D)	119.44		102.5	A	108.3	A	78.00		8.80		9.37		56.5		16.96		98.32
SS520(R)	117.37		100.1	A	107.3	A	77.70		8.80		8.63		54.4		17.16		94.88
SISSON	117.36		100.0	A	100.0	A	78.00		9.30		10.42		57.2		16.76		83.10
VA97W-375WS	112.08		89.5	D	101.6	A	77.60		10.70	Q	10.55		54.9		17.08		103.56
SS560(R)	111.45		97.1	B	78.6	F	78.20		9.40		10.17		61.3	Q	16.50		96.66
CHOPTANK	109.02		88.0	D	95.1	B	77.30	*	10.70	Q	10.35		58.0		16.79		109.62
COKER9295(D)	108.57		98.6	B	105.3	A	78.20		9.40		9.67		55.6		16.98		
SS550(B)	108.39		93.6	C	95.0	B	77.40	*	10.10	*	9.82		61.2	Q	17.15		88.35
PIONEER26R24(D)	106.18	*	93.1	C	98.3	B	77.00	*	9.60		9.74		60.0	*	17.03		110.16
VA99W-176	104.83	*	83.1	E	93.1	C	76.60	Q	11.90	Q	9.36		58.8		17.01		61.79
TRIBUTE	104.48	*	93.0	C	95.2	B	77.70		9.90	*	9.04		58.7		16.98		101.51
McCORMICK	103.67	*	98.1	B	101.2	A	77.90		9.10		10.37		58.1		16.83		82.80
USG 3209(RT)	86.62	Q	77.6	F	73.4	F	77.40	*	12.10	Q	10.03		63.3	Q	16.50		92.16
Experimental Lines																	
VA01W-205	129.07		107.0	A	104.1	A	78.90		8.60		9.52		58.3		17.52		84.53
VAN98W-170WS	126.03		106.9	A	104.8	A	78.60		7.80		9.52		54.5		17.47		107.35
VA00W-526	119.60		103.1	A	89.3	D	79.20		8.90		10.35		57.5		16.76		116.88
VA98W-335	117.91		98.6	B	98.4	B	77.80		9.20		10.19		60.8	*	17.10		109.29
VA99W-28	115.41		97.6	B	99.7	B	78.00		9.10		9.83		55.7		16.75		119.50
VA97W-375RS	114.53		96.6	B	102.4	A	77.90		9.40		10.78		55.2		16.96		79.30
VA00W-286	114.42		104.2	A	90.0	C	78.70		8.10		10.23		57.4		16.62		92.42
VA01W-353	113.62		99.4	B	94.4	C	78.30		9.10		9.92		58.1		16.74		81.31
VA01W-18	113.31		89.0	D	82.8	E	77.30	*	10.10	*	10.30		59.0		16.41	*	74.98
VA01W-145	112.10		93.9	C	101.2	A	77.60		9.60		9.67		54.0		16.75		106.88
VA01W-112	111.77		103.6	A	88.3	D	78.60		8.30		10.19		57.5		16.48		104.85
VAN98W-342	109.23		86.1	D	81.4	E	77.00	*	11.70	Q	11.43	*	64.3	Q	16.73		117.09
MV5-46	106.25	*	88.9	D	82.0	E	77.20	*	10.00	*	10.54		60.8	*	16.53		80.54
VA01W-99	105.89	*	92.3	C	86.1	D	77.70		10.30	*	11.13	*	59.1		16.57		114.91
VA98W-631	101.71	*	85.9	D	73.3	F	75.90	Q	11.10	Q	10.70		58.8		16.29	*	102.57
VA01W-148	98.30	Q	77.2	F	97.2	B	76.90	Q	12.20	Q	9.96		61.3	Q	16.84		80.59
VA00W-38	82.62	Q	65.2	F	97.2	B	75.50	Q	14.50	Q	9.10		59.0		16.82		101.06

SECTION 7 - WHEAT SCAB RESEARCH

A major focus of Dr. Carl Griffey's wheat breeding program is the development of adapted varieties with resistance to scab, Fusarium head blight (FHB), having reduced disease incidence and severity. Extensive past and ongoing effort by several members of Dr. Carl Griffey's staff including Jianli Chen, Julie Wilson, Daryoosh Nabati, Tom Pridgen, Pat O'Boyle, and Jason Kenner is paying off with the identification and development of new lines with increased scab resistance as well as good agronomic traits. Elite wheat lines and varieties having a FHB index [(incidence x severity) x 100] of <11 in 2003-04 were VA01W-99, Neuse, Massey, Coker B970051, VA01W-310, VA02W-519, Tribute, Pat, Coker 9295, and Vigoro 9412 (Table 43). Fusarium head blight index results from 2002-2004 demonstrate that released varieties such as McCormick, Tribute, Neuse, and Roane have reduced scab infection. Twenty-six SRW wheat lines possessing both high yield potential and scab resistance were selected among 268 lines evaluated in Virginia's 2004 Scab Observation tests. One elite scab resistant SRW wheat line VA02W-713 ranked 1st in grain yield (77 Bu/Ac) among 54 entries in Virginia's Advance Wheat Test over three locations, and will be entered in Virginia's Official Variety Trials in 2005. In addition, a set of near isogenic lines incorporating resistance QTLs from W14 and Futai 8944 into Roane and Ernie backgrounds have been developed using molecular-marker assisted backcross breeding.

Table 43. Summary of performance of entries in the Virginia Tech Wheat Test for reaction to Fusarium Head Blight and other diseases, 2004 harvest.

LINE	Index	Incidence %	Severity %	Heading Mar.31+	BYDV (0-9)	S.nordorum (0-9)
VA01W-99	3.6	27.5	13.8	42	6	3
NEUSE(R)	6.0	50.0	12.6	43	7	4
MASSEY	7.5	55.0	13.4	41	4	4
COKER B970051(D)	7.7	60.0	12.9	41	6	7
VA01W-310	8.6	40.0	21.4	41	4	2
VA02W-519	10.1	70.0	15.0	40	5	4
TRIBUTE	10.2	42.5	24.0	40	6	2
PAT(R)	10.4	45.0	22.9	45	4	6
COKER 9295(D)	10.7	50.0	21.3	43	7	3
V9412(D)	10.9	70.0	15.1	39	4	3
PIONEER XW02M(D)	11.0	67.5	16.3	42	5	2
PIONEER 26R15(D)	11.1	65.0	16.2	41	5	6
VA01W-18	11.4	65.0	17.4	41	2	1
VA01W-154	11.6	55.0	21.6	41	6	3
MD71-5	11.6	55.0	20.6	41	7	5
SS EXP830938(R)	12.1	80.0	15.2	41	6	2
V9212(D)	12.2	55.0	20.6	40	7	5
MV8-29	13.2	60.0	21.3	41	4	4
COKER 9312(D)	13.7	90.0	15.3	37	2	6
VA00W-38	13.8	65.0	18.7	40	4	2
VA02W-596	13.8	65.0	22.5	43	7	3
MV5-46	15.1	80.0	18.5	39	5	3
MV27-0187	15.5	75.0	20.1	41	6	3
VA97W-24	15.7	80.0	19.2	41	6	2
VA98W-335	15.7	75.0	19.9	42	8	6
USG 3650(RT)	15.8	65.0	24.2	43	6	7
PIONEER 26R12(D)	16.5	80.0	20.6	41	6	3
RACHEL	16.6	80.0	20.3	39	8	4
MV6-82	17.0	65.0	25.3	40	4	5
RENWOOD 3260	17.8	55.0	31.8	39	5	5
VA00W-526	18.1	85.0	21.4	42	7	5
VA01W-145	18.4	57.5	27.5	41	4	3
VA02W-370	18.6	75.0	24.6	38	3	5
SS EXP830238(R)	18.6	85.0	22.0	42	5	7
VA02W-513	19.0	85.0	22.6	39	3	3
VA01W-205	19.4	75.0	25.4	39	3	6
VA02W-553	19.6	75.0	26.1	41	7	3
NC00-15332(R)	19.8	90.0	21.7	41	6	7
VA02W-124	19.9	80.0	25.0	41	2	4
SS 560(R)	20.0	65.0	31.7	43	4	3
VA02W-567	20.8	80.0	26.0	39	5	4
COKER 9184(D)	20.8	70.0	28.6	42	4	8
McCORMICK	21.3	85.0	24.7	39	5	3
VA01W-148	21.6	80.0	27.2	42	2	2
USG 3592(RT)	21.7	75.0	28.5	42	6	4
FEATHERSTONE 520(RT)	21.9	65.0	31.3	40	8	4

Table 43, continued. Summary of performance of entries in the Virginia Tech Wheat Test for reaction to Fusarium Head Blight and other diseases, 2004 harvest.

LINE	Index	Incidence %	Severity %	Heading Mar.31+	BYDV (0-9)	S.nordorum (0-9)
USG 3209(RT)	22.0	85.0	25.8	41	7	5
VA01W-112	22.2	95.0	23.7	10	1	3
VA00W-366	22.7	80.0	28.1	9	5	2
COKER 9375	23.9	70.0	34.2	12	7	2
VAN98W-342	24.0	72.5	28.6	10	6	5
SS 550(B)	24.1	90.0	26.7	9	8	4
VA98W-627WS	24.8	70.0	35.4	11	7	6
VA02W-683	25.7	87.5	29.4	9	3	3
VA00W-286	26.0	70.0	36.6	11	3	1
PIONEER 26R58(D)	26.2	80.0	31.1	9	5	3
VA02W-555	27.4	95.0	28.7	10	3	3
MD11-52(R)	27.5	95.0	28.6	9	7	6
SISSON	28.2	95.0	29.9	9	7	2
VA98W-631	28.2	85.0	32.8	11	8	3
VA02W-398	30.6	85.0	36.4	10	7	1
VA99W-28	30.8	90.0	33.2	11	5	1
VA98W-627RS	31.4	80.0	39.2	10	6	3
CRAWFORD	32.2	70.0	42.2	9	5	2
VA97W-375WS	33.2	95.0	34.4	10	7	5
H-84(D)	33.6	75.0	44.1	9	7	4
VA01W-21	34.5	75.0	41.9	9	7	5
VAN98W-170WS	36.5	95.0	38.7	9	7	4
VA02W-267	36.7	92.5	39.3	9	2	2
NC99-13022(R)	39.3	80.0	48.9	14	8	5
VA97W-375RS	39.4	100.0	39.4	9	7	8
USG EXP370(RT)	39.9	95.0	41.7	10	5	7
VA98W-706	40.4	90.0	42.6	11	5	8
GA931233E17(D)	41.6	75.0	54.8	10	7	6
SS EXP830838(R)	43.0	100.0	43.0	9	2	3
VA01W-353	44.2	85.0	53.7	10	7	4
NC00-15389(R)	44.9	90.0	47.3	10	6	7
VA99W-176	45.6	92.5	48.7	9	5	4
PIONEER 26R24(D)	56.0	90.0	59.0	9	3	2
SS 520(R)	67.7	100.0	67.7	8	5	2
Grand Mean	23.0	75.5	28.8	40	5	4
LSD (0.05)	20.1	22.6	19.3	32	2	2
CV (%)	52.6	18.0	40.1	9	26	37

* VA01W-99 is a newly identified scab resistant lines in addition to McCormick, Tribute, Neuse, and Roane, released in previous years.

Entries were planted at Blacksburg, VA and were inoculated at 50% and 100% heading stages with Fusarium graminearum spore suspension (5 x 10^4 spores/ml).

Scab Incidence (%): Percentage of infected spikes among 40 randomly selected spikes.

Scab Severity (%): Percentage of infected spikelets divided by total number of spikelets among 10 infected spikes.

Scab Index: Scab incidence x scab severity x 100; an overall indicator of scab resistance/susceptibility level.

Table 44. Two year average summary of yield, test weight, Fusarium head blight (scab), glume blotch resistance of entries in Virginia Tech Wheat Tests, 2003 and 2004 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		FUSARIUM HEAD BLIGHT INDEX (FHB Incidence X Severity) X 100			Glume Blotch (0-9)		
					2004	2003	2-Year	State	FHB	Mean
	(12)		(12)		(1)	(1)	(2)	(2)	(1)	(3)
ROANE					5	3	4			
NEUSE(R)	60	-	58.4	+	6	4	5	2	4	3
VA01W-99	64		56.8	+	4	6	5	2	3	3
MASSEY	59	-	56.3		8	10	9	2	4	3
VA00W-38	66		55.1	-	14	4	9	2	2	2
VA01W-18	69	+	56.4		11	9	10	2	1	2
TRIBUTE	69	+	58.4	+	10	11	10	1	2	2
COKER 9295(D)	61	-	54.8	-	11	10	10	2	3	3
V9212(D)	64		55.7	-	12	10	11	3	5	4
VA97W-24	72	+	56.1		16	8	12	2	2	2
USG 3650(RT)	62	-	55.6	-	16	8	12	3	7	5
VA01W-205	68		56.5		19	4	12	3	6	5
MD71-5	67		56.0		12	12	12	2	5	4
McCORMICK	67		57.9	+	21	5	13	1	3	2
USG 3209(RT)	70	+	55.4	-	22	6	14	3	5	4
MV5-46	71	+	57.8	+	15	14	15	1	3	2
SS 560(R)	68		55.9		20	11	15	2	3	3
VA00W-526	63	-	56.4		18	15	16	2	5	4
VA01W-145	66		56.1		18	15	17	2	3	3
VA98W-335	65		56.2		16	18	17	3	6	5
VAN98W-342	69	+	56.0		24	10	17	2	5	4
PIONEER 26R58(D)	67		54.9	-	26	9	17	4	3	4
VA01W-148	64		56.1		22	16	19	2	2	2
COKER 9375	64		54.5	-	24	14	19	1	2	2
VA00W-286	65		55.8	-	26	12	19	1	1	1
SS 550(B)	68		55.9		24	14	19	1	4	3
FEATHERSTONE 520(RT)	65		56.9	+	22	18	20	2	4	3
COKER 9184(D)	63	-	58.0	+	21	19	20	2	8	5
CHOPTANK	66		56.5		28	16	22	2	6	4
SISSON	68		56.4		28	16	22	2	2	2
VA01W-112	67		54.9	-	22	22	22	2	3	3
VA99W-28	68		54.7	-	31	17	24	1	1	1
VA98W-631	66		54.1	-	28	22	25	2	3	3

Table 44, continued. Two year average summary of yield, test weight, Fusarium head blight (scab), glume blotch resistance of entries in Virginia Tech Wheat Tests, 2003 and 2004 harvests.

			Test		FUSARIUM HEAD BLIGHT INDEX (FHB Incidence X Severity) X 100			Glume Blotch (0-9)		
	Yield		Weight							
Line	(Bu/a)		(Lb/bu)		2004	2003	2-Year	State	FHB	Mean
	(12)		(12)		(1)	(1)	(2)	(2)	(1)	(3)
RENWOOD 3706	64		56.4		40	10	25	3	8	6
VAN98W-170WS	64		56.9	+	37	18	27	1	4	3
VA97W-375RS	68		56.3		39	16	28	2	8	5
VA99W-176	73	+	56.1		46	12	29	2	4	3
CRAWFORD	68		56.6	+	32	26	29	2	2	2
VA01W-353	70	+	54.7	-	44	15	29	2	4	3
GA931233E17(D)	66		56.9	+	42	18	30	2	6	4
VA97W-375WS	68		55.9		33	32	32	2	5	4
PIONEER 26R24(D)	68		55.8	-	56	13	35	2	2	2
SS 520(R)	69	+	56.0		68	14	41	1	2	2
Average	66		56.2		23	12	18	2	4	3
LSD (0.05)	3		0.4		20	14		1	2	
C.V.	9		1.7		53	68		33	37	

Released cultivars are in bold print. A plus or minus sign indicates performance signficantly above or below mean.

Varieties are ordered on basis of 2-year average scab index.

The number in parentheses below column headings indicates number of location-years on which data are based.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

Table 45. Three year average summary of yield, test weight, Fusarium head blight (scab), glume blotch resistance of entries in Virginia Tech Wheat Tests, 2002-2004 harvests.

			Test	FUSARIUM HEAD BLIGHT INDEX								
	Yield		Weight	(FHB Incidence X Severity) X 100					Glume Blotch (0-9)			
Line	(Bu/a)		(Lb/bu)	2004	2003	2002	2-Year	3-Year	State	FHB	Mean	
	(12)		(12)	(1)	(1)	(1)	(2)	(3)	(2)	(1)	(3)	
ROANE				5	3	8	4	5				
NEUSE(R)	66	-	58.5 +	6	4	9	5	6	2	4	3	
MASSEY	61	-	56.5 -	8	10	6	9	8	2	4	3	
VA00W-38	69	-	55.6 -	14	4	7	9	8	2	2	2	
TRIBUTE	75	+	59.1 +	10	11	5	10	8	1	2	2	
USG 3650(RT)	68	-	56.4 -	16	8	6	12	10	3	7	5	
McCORMICK	74	+	58.5 +	21	5	5	13	10	1	3	2	
VA97W-24	77	+	56.7	16	8	10	12	11	2	2	2	
VAN98W-342	73	+	56.6	24	10	2	17	12	2	5	4	
COKER 9295(D)	65	-	55.4 -	11	10	16	10	12	2	3	3	
USG 3209(RT)	74	+	56.0 -	22	6	12	14	13	3	5	4	
VA98W-335	71		57.0	16	18	7	17	14	3	6	5	
VA00W-526	72		57.2 +	18	15	10	16	14	2	5	4	
SS 550(B)	74	+	56.5 -	24	14	11	19	16	1	4	3	
SS 560(R)	73	+	56.7	20	11	19	15	17	2	3	3	
FEATHERSTONE 520(RT)	68	-	57.5 +	22	18	12	20	17	2	4	3	
COKER 9184(D)	67	-	58.4 +	21	19	12	20	17	2	8	5	
SISSON	74	+	56.9	28	16	10	22	18	2	2	2	
CHOPTANK	72		57.0	28	16	14	22	19	2	6	4	
RENWOOD 3706	70		57.2 +	40	10	8	25	19	3	8	6	
VA97W-375RS	75	+	56.8	39	16	10	28	22	2	8	5	
VA99W-176	75	+	56.3 -	46	12	12	29	23	2	4	3	
VA98W-631	70		54.8 -	28	22	21	25	24	2	3	3	
PIONEER 26R24(D)	72		56.6	56	13	9	35	26	2	2	2	
VA97W-375WS	74	+	56.5 -	33	32	22	32	29	2	5	4	
SS 520(R)	74	+	56.4 -	68	14	7	41	30	1	2	2	
Overall Mean	71		56.8	23	12	11	18	15	2	4	3	
LSD (0.05)	2		0.3	20	14	8			1	2		
C.V.	9		1.7	53	68	55			33	37		

Released cultivars are in bold print. A plus or minus sign indicates performance signficantly above or below mean.

Varieties are ordered on basis of 3-year average scab index.

The number in parentheses below column headings indicates number of location-years on which data are based.

The 0-9 ratings indicate a genotype's response to disease, where 0 = highly resistant and 9 = highly susceptible.

SECTION 8 - SELECTING WHEAT VARIETIES FOR SPECIFIC PLANTING DATES

When planting early, wheat varieties that are day-length sensitive, require a longer vernalization period (must be exposed to freezing temperatures after germination for at least 6 to 8 weeks), and are relatively late in heading should be selected. Early planted varieties should also have good resistance to barley yellow dwarf virus (or use Gaucho®) and good resistance to powdery mildew (or use a fungicide seed treatment). Day-length sensitive wheat varieties tend to remain prostrate during winter through early spring and do not begin to joint (heads move up from soil level) until the day-length increases in mid-March regardless of late-winter temperatures. Day-length insensitive varieties that have been vernalized will grow and begin jointing when sufficient heat units have been accumulated. The winter of 2001-2002 in Virginia was very warm and day-length insensitive varieties were jointing by early to mid-March in eastern Virginia. Day-length sensitive varieties such as McCormick, Tribute, Coker 9025, and Roane were less than six inches tall (not jointing) whereas day-length insensitive, early varieties such as Southern States 518, Pioneer Brand 26R61, and AGS 2000 were 9-10 inches tall with the head at least three inches above the soil surface. This is all important because temperatures of 20-25 ºF will kill the developing head of jointed wheat whereas such temperatures can be tolerated until jointing. Further work will be done to identify more day-length sensitive varieties for early planting. Most of the leading varieties currently available are intermediate in their response to day-length.

The recommendation is to plant varieties that are day-length sensitive with later heading dates when planting prior to the optimum planting date. Do not plant early heading day-length insensitive varieties until about the time of the first average frost for your area.