Virginia Cooperative Extension
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Small Grains In 2014

2014 Virginia Polytechnic Institute and State University CSES-97NP

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Recommended Small Grain Varieties

The following are the small grain variety recommendations for Virginia in 2014. The recommendations are based on the agronomic performance in wheat and barley variety tests conducted by the Research and Extension Divisions of Virginia Tech in the various agricultural regions of the state.

Recommended Wheat Varieties Arranged in Order of Maturity

All varieties have been extensively tested and proven to be adapted statewide.

Agronomic Characteristics

Cultivar	Grain Yield	Test Weight	Milling Quality	SRW Baking Quality
Early Heading Varieties (115-117 d, Julian)				
Progeny 125	2	1	Poor	Good
Jamestown*	2	4	Moderate	Poor
USG 3120*	3	4	Good	Moderate
Progeny 117	2	2	Very Good	Moderate
SS 520*	2	1	Good	Poor
Mid-Season Heading Varieties (118-120 d, Julian)				
USG 3612	3	1	Good	Very Good
SS 5205	3	4	Good	Very Good
Yorktown*	3	4	Moderate	Poor
SS 8412	3	4	Good	Moderate
USG 3438	3	1	Very Good	Very Good
AgriMAXX 427	3	1	Good	Very Good
SS 8415*	3	3	Good	Moderate
Full-Season Heading Varieties (121-123 d, Julian)				
AgriMAXX 413	3	1	Good	Very Good
SS 8340	3	4	Good	Good
Featherstone VA-258*	3	2	Moderate	Poor
Shirley	4	1	Good	Good
Pioneer 26R10	4	2	Good	Moderate
Pioneer 26R41	4	2	Good	Good
Pioneer 26R20	3	4	Moderate	Moderate
Featherstone 73	3	4	Good	Moderate
USG 3251	4	2	Moderate	Good

* These lines break dormancy and begin growing rapidly when temperatures warm in late winter/early spring and should not be planted early in order to avoid potential freeze damage.

4 - Significantly higher than average
3 - Average or higher than average
2 - Average or lower than average
1 - Significantly lower than average

Disease Resistance

Cultivar	FHB† resistance	Powdery Mildew Resistance	Leaf Rust Resistance
Early Heading Varieties (115-117 d, Julian)			
Progeny 125	Very Good	Weak	Weak
Jamestown	Very Good	Very Good	Moderate
USG 3120	Moderate	Very Good	Very Good
Progeny 117	Moderate	Weak	Moderate
SS 520*	Weak	Very Good	Moderate
Mid-Season Heading Varieties (118-120 d, Julian)			
USG 3612	Very Good	Moderate	Moderate
SS 5205	Moderate	Very Good	Very Good
Yorktown	Very Good	Very Good	Very Good
SS 8412	Moderate	Very Good	Very Good
USG 3438	Good	Moderate	Moderate
AgriMAXX 427	Good	Moderate	Weak
SS 8415*	Weak	Very Good	Moderate
Full-Season Heading Varieties (121-123 d, Julian)			
AgriMAXX 413	Good	Moderate	Moderate
SS 8340	Very Good	Weak	Moderate
Featherstone VA-258	Weak	Moderate	Moderate
Shirley	Weak	Very Good	Very Good
Pioneer 26R10	Good	Weak	Weak
Pioneer 26R41	Good	Moderate	Very Good
Pioneer 26R20	Weak	Moderate	Moderate
Featherstone 73	Moderate	Very Good	Very Good
USG 3251	Moderate	Moderate	Weak

† FHB - Fusarium head blight

Recommended Barley Varieties

	Hulled Barley							Hulless Barley	
	Nomini*	Callao	Price	Thoroughbred	Atlantic	Secretariat		Amaze 10	Dan
Adapted Regions									
Coastal Plain		X	X	X	X	X		X	X
Piedmont, South of James River		X	X	X	X	X		X	X
Piedmont, North of James River		X	X	X	X	X		X	X
West of Blue Ridge	X	X	X	X	X	X		X	X
Agronomic Characteristics									
Yield	2	2	3	4	4	4		4	3
Test Weight	1	2	3	3	3	3		2	4
Lodging Tolerance	3	1	2	3	3	3		2	3
Relative Height	3	2	2	3	2	2		3	2
Relative Heading	Avg	Early	Avg	Late	Early	Avg		Avg	Avg

4 - Significantly higher than average
3 - Average or higher than average
2 - Average or lower than average
1 - Significantly lower than average

*Nomini barley has low test weight. It is not recommended in eastern Virginia because low test weight grain is unsuitable for export or domestic non-ruminant feed markets.

Barley and Wheat Entries

Commercial Barley Entries

Virginia Tech and Virginia Crop Improvement Association, 9142 Atlee Station Road, Mechanicsville, VA 23116 – Amaze 10, Atlantic, Barsoy, Callao, Dan, Doyce, Eve, Nomini, Price, Secretariat, Thoroughbred, and Wysor.

Commercial and Experimental Wheat Entries

AgriMAXX Wheat Company, 7167 Highbanks Road, Mascoutah, IL 62258 – AgriMAXX 413, AgriMAXX 415, AgriMAXX 427, AgriMAXX 434, AgriMAXX 447, AgriMAXX Exp 1444, AgriMAXX Exp 1450, and AgriMAXX Exp 1465.
Crop Production Services, 1140 Sweet Road, East Aurora, NY 14052 – Dyna-Gro 9042, Dyna-Gro 9171, Dyna-Gro 9223, Dyna-Gro 9343, Yorktown, and Shirley.
Dupont Pioneer, 59 Greif Parkway Suite 200, Delaware, OH 43015 – Pioneer 25R32, Pioneer 25R40, Pioneer 26R10, Pioneer 26R12, Pioneer 26R20, Pioneer 26R41, and Pioneer 26R53.
Eddie Mercer Agri-Services, Inc, 6900 Linganore Road, Frederick, MD 21702 – MBX12-W-270, MBX12-W-296, MBX14-K-297, MBX14-S-210, MBX12-V-251, and MBX11-V-258.
Featherstone Seed Company, 13941 Genito Road, Amelia, VA 23002 - Featherstone VA 258 and Featherstone 73.
University of Georgia, 1109 Experiment Street, Griffin, GA 30223 – GA-041293-11E54, GA-041293-11LE37, and GA-04434-11E44.
Limagrain Cereal Seeds, 257 E. Hail, Bushnell, IL 61422 – LCS L-Brand 221.
University of Maryland, 27664 Nanticoke Rd, Salisbury, MD 21801 – MD04W249-11-7 and MD04W249-11-12.
Mid Atlantic Seeds, 204 St. Charles Way, #163E, York, PA 17402 – MAS #2, MAS #4, MAS #6, MAS #7, MAS #10, MAS #23, MAS #31, MAS #32, MAS #33, MAS #34, MAS #35, MAS #36, and MAS #37.
NC State University, 840 Method Road Unit 3, Raleigh, NC 27695 – NC-Cape Fear, NC08-21273, and NC09-22402.
Progeny Ag Products, 1529 Hwy 193, Wynne, AR 72396 – Progeny 117, Progeny 125, Progeny 185, Progeny 870, Progeny 357, Progeny PGX 13-1, Progeny PGX 13-2, Progeny PGX 13-4, and Progeny PGX 13-6.
Southern States Cooperative, 6606 West Broad Street, Richmond, VA 23230 - SS 520, SS 5205, SS 8340, SS 8360, SS 8412, SS 8415, and SS 8870.
Steyer Seeds, PO Box 209, Old Fort, OH 44861 – Steyer Kidwell, Steyer Hunker, and Steyer Heilman.
Syngenta Seeds, Inc., 806 N. 2nd St, Berthoud, CO 80513 – SY 483, SY 474 and SY 007.
UniSouth Genetics, 3205-C HWY 46S, Dickson, TN 37055 – USG 3013, USG 3120, USG 3201, USG 3251, USG 3315, USG 3404, USG 3438, USG 3523, USG 3555, USG 3612, USG 3833, and USG 3993.
Virginia Tech and Virginia Crop Improvement Association, 9142 Atlee Station Road, Mechanicsville, VA 23111 –Jamestown, Massey, Merl, and all lines prefixed by VA.

Appreciation is expressed to the Virginia Small Grains Check-Off Board, AgriMAXX, Crop Production Services, Dupont Pioneer, Eddie Mercer Agri-Services, Inc., Featherstone Seed, Inc., Limagrain Cereal Seeds, Mid Atlantic Seeds, Progeny Ag Products, Southern States Cooperative, Steyer Seeds, Syngenta Seeds, Inc., 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. Carl Griffey, Small Grains Breeder; Mr. Harry Behl, Agricultural Supervisor; Mr. Tyler Black, Field Crop Lab Research Specialist; Dr. Subas Malla, Research Scientist; Ms. Elizabeth Hokanson, Research Associate. Location Supervisors: Mr. Tom Custis (Painter); Mr. Bobby Ashburn (Holland); Mr. Bob Pitman, Mr. Mark Vaughn, (Warsaw); Mr. Ned Jones (Blackstone); Dr. Carl Griffey, Mr. Wynse Brooks, Mr. Jon Light (Blacksburg); Mr. Matt Yancey (Shenandoah Valley); Mr. Steve Gulick (Orange).

Introduction

The following tables present results from barley and wheat varietal tests conducted in Virginia in 2012-2014. Small-grain cultivar performance tests are conducted each year in Virginia by the Virginia Tech Department of Crop and Soil Environmental Sciences and the Virginia Agricultural Experiment Station. The tests provide information to assist Virginia Cooperative Extension Service agents in formulating cultivar recommendations for small grain producers and to companies developing cultivars and/or marketing seed within the state. Yield data are given for individual locations and across locations and years; yield and other performance characteristics are averaged over the number of locations indicated in parenthesis near the column heading. 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. Details about management practices for barley and wheat are listed for each experimental location.

The Season

Temperatures in October were below the long-term average and, combined with rain showers, wheat and barley planted acres were 10% behind the 5-yr average by the third week of October. Overall, temperatures in November were colder than normal as well and while topsoil moisture was mostly reported do be adequate fall growth was slowed. In mid-November 95% of the intended barley crop and 78% of wheat was seeded. Wheat was rated 85% good or excellent, but only 62% of barley was rated in these categories due to slow growth and reduced tillering. Most of the state received adequate rainfall in December but also experienced wide swings in temperatures. Many areas of the Commonwealth received significant snow in January and nighttime lows below zero degrees. February conditions were much the same and small grain was rated as 68% in good or excellent condition with 24% fair. Continued wet and cool to cold weather hampered small grain progress and the portion of the crop rated as good or excellent was reduced to 61%. Crop condition for both wheat and barley improved in April. Major storm events delivered significant rainfall to many areas of Virginia in early May. By May 12, 66% of the wheat crop was headed, compared with 74% on the same date in 2013. High temperatures in the high 80's and 90's resulted in a rapid increase in wheat heading to 84% by May 19. Harvest was estimated to be complete on 15% of the barley crop and 2 % of wheat by May 27, increasing to 31 and 13%, respectively by the next week. Warm weather in mid-June hastened crop maturity and 40% of the anticipated wheat crop was harvested by June 22. The Virginia Department of Agriculture and Consumer Services estimated 2014 wheat yields at 65 bushels per acre and total production to be about 17.2 million bushels, up one percent from last year's total wheat crop. Barley yields in Virginia are expected to average 76 bushels per acre, down six bushels per acre from last year. Barley production is expected to total 2.51 million bushels, down 25 percent from 2013. Harvested acreage is expected to total 33,000 acres, down 8,000 acres from last year.

Figure 1. 2013-14 and 30-yr mean cumulative growing season precipitation for Virginia.

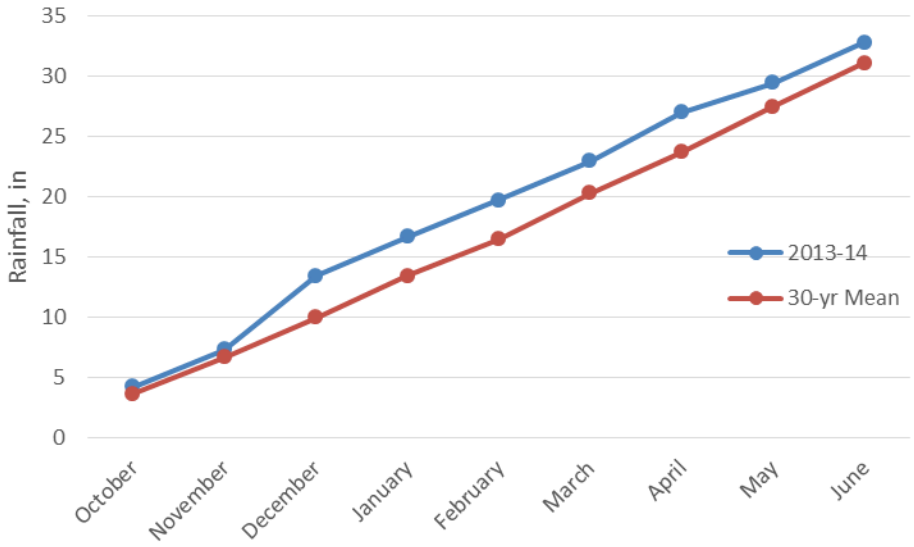
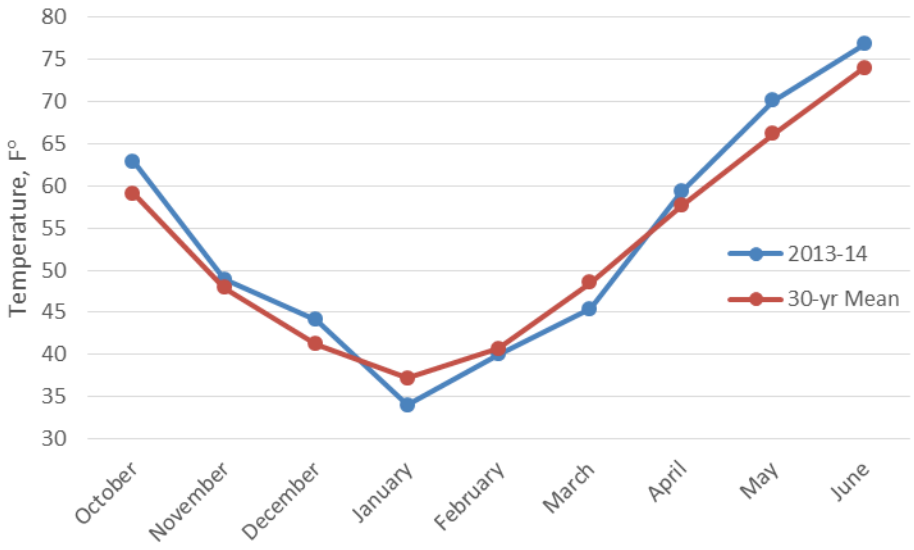


Figure 2. Growing season monthly average temperature, 2013-14 and 30-yr mean.



Section 1: Barley Varieties

The Virginia Tech primary barley breeding efforts were focused on development and improvement of yield potential of winter barley cultivars and a major focus on incorporation of value added traits geared towards development of new markets. As a result, two winter barley varieties (Amaze 10-hulless and Secretariat-hulled) were released from the breeding program. The white seeded winter hulless barley variety Amaze 10 tested as VA07H-31WS was officially released in April 2013. The hulled barley variety Secretariat evaluated as VA08B-85 was released in March 2014. Both varieties are targeted for production in the mid-Atlantic and southeastern United States as a potential commodity for feed, fuel and food.

This season (2013-2014) we evaluated over 550 pure lines in replicated yield tests at two to five locations in Virginia in order to identify potential high yielding varieties. Approximately 100 advance barley lines were evaluated in replicated yield tests at locations in North Carolina, Kentucky, Pennsylvania, and Virginia. Last winter (2013-2014) seedling tests of over 600 advanced barley lines were conducted for reaction to three races of leaf rust and one composite isolate of powdery mildew in the greenhouse. In field tests, disease reaction data were collected for all prevalent diseases (leaf rust, net blotch, *Barley Yellow Dwarf Virus* (BYDV), powdery mildew, and FHB). Other traits evaluated in field trials include winter hardiness, heading date, plant height, straw strength, grain yield, test weight and protein content.

The Virginia Tech barley-breeding program is the largest and one of only a few surviving programs in the eastern United States. The barley program is significantly diverse with breeding efforts focused on development of superior, widely adapted, high yielding winter barley cultivars and a major focus on incorporation of value-added traits geared towards development of new markets. The breeding program is currently part of a national winter malt barley breeding effort that includes a total of 13 states in developing malt barley varieties that can be grown over large and diverse production areas to provide a uniform supply of winter barley for the malting and brewing industries.

Virginia grown barley typically yields in excess of 100 bushels per acre and fits well in many crop rotation systems. However, profitable barley production on over 50,000 acres in Virginia will require revival of international market opportunities and/or improve domestic value added opportunities.

Hulless Barley

Hulless barley tests were planted in seven-inch rows at Blackstone, Orange, Holland, and Painter. They were planted in six-inch rows at Warsaw and Blacksburg. The no-till test at Holland was planted at 66 seeds per square foot. All other locations were planted at 60 seeds per square foot. Yields from Holland in the 2013 harvest year were not included in the over-location or over-year analyses.

Three year average (2012, 2013 and 2014) grain yield for Doyce hulless barley in Virginia was 83 bushels per acre with test weight of 54.1 pounds per bushel. Average grain yield of Eve was 81 bushels per acre with test weight of 57.3 pounds per bushel. Grain yield of Dan averaged 85 bushels per acre and test weight was 58.8 pounds per

bushel. Dan had the highest average test weight (58.8 pounds/bushel) that was 1.5 pounds per bushel higher than Eve and 4.7 pounds per bushel higher than Doyce (54.1 pounds/bushel). Meanwhile, the newly released hulless barley variety Amaze 10 had the highest three year average grain yield (90 bushels per acre) that was 5 bushels per acre higher than that of Dan (85 bushels/acre), 7 bushels per acre higher than Doyce, 9 bushels per acre higher than Eve, and 6 bushels per acre more than the test average.

Hulled Barley

Hulled barley tests were planted in seven-inch rows at Blackstone, Orange, Holland, and Painter. They were planted in six-inch rows at Warsaw and Blacksburg. The no-till test at was planted at 48 seeds per square foot. All other locations were planted at 44 seeds per square foot. Yields from Holland in the 2013 harvest year were not included in the over-location or over-year analyses.

Three year average (2012, 2013 and 2014) grain yield of Thoroughbred hulled barley was 108 bushels per acre with average test weight of 46.4 pounds per bushel compared to the mean yield of 100 bushel per acre and test weight of 46.4 pounds per bushel for the mean of all cultivars tested. Three year average grain yield of Atlantic (106 bushels per acre) was 2 bushels per acre less than Thoroughbred, 4 bushels per acre higher than Price (101 bushels per acre), 8 bushels per acre higher than Callao and 12 bushels per acre higher than Nomini. At the same time, the newly released hulled barley variety Secretariat had the highest three year average grain yield (111 bushels per acre) that was 3 bushels per acre higher than Thoroughbred, 5 bushels per acre higher than Atlantic, 10 bushels per acre higher than Price, and significantly higher than Callao and Nomini.

Our current research interests in the barley breeding program include: development of winter habit barley varieties for feed, malting, fuel ethanol and human nutrition; incorporation of quantitative disease resistance; characterization and utilization of genetic diversity; stimulating local barley production; and barley quality assessment.

Summary of barley management practices for the 2014 harvest season (All rates are given on a per acre basis.)

Blacksburg - Planted September 30 – October 1, 2013. Preplant fertilizer was 30-46-60 September 25, 2013. Site was sprayed with .6 oz Harmony Extra SG® on November 21, 2013. Site was fertilized with 25 lb N on February 11, 2014 and with 50 lb N plus 0.75 oz Harmony Extra SG® on April 2, 2014. Harvest occurred June 17, 2014.

Blackstone - Planted October 21, 2013. Preplant fertilizer was 300 lb 11-6-20 on September 18, 2013. Site was top-dressed with 60 lb N and K using 34-0-0 and 0-0-60, respectively, on January 28, 2014. Site was sprayed with Harmony Extra SG® and Unison on March 21, 2014. Site was fertilized with 60 lb N using UAN on April 3, 2014. Harvest occurred June 18, 2014.

Painter - Planted October 24, 2013. Preplant fertilizer was 30 lb N on October 23, 2013. Site was fertilized with 60 lb N using 30% UAN and 0.75 oz Harmony Extra SG® March 12, 2014. Site was fertilized with 50 lb N using 30% UAN cut 60/40 to reduce burn April 25, 2014. Harvest occurred June 10-16, 2014.

Warsaw - Planted October 22, 2013. Preplant fertilizer was 30-60-60-5 applied October 18, 2013. Site was fertilized using 12-0-0-1.5 at 25 lb on November 21, 2013 and at 25 lb on February 26, 2014. Site was treated with 6.5 oz Starane® and .75 oz Harmony Extra SG® plus surfactant on March 11, 2014. Site was fertilized with 60 lb N using 24-0-0-3 April 3, 2014. Harvest occurred June 7, 2014.

Holland - Planted no-till October 28, 2013. Preplant fertilizer was 1/2 ton lime and 355 lb 5-13-30 on October 21, 2013. Site was fertilized with 60 units N using 24-0-0-3 plus 0.6 oz Harmony Extra SG® on February 20, 2014. Site was fertilized with 40 units N using 24-0-0-3 plus 0.6 oz Harmony Extra SG® on March 14, 2014. Harvest occurred June 4-5, 2014.

Orange - Planted October 9, 2013. Preplant fertilizer was 30-60-20 October 1, 2013. Sixty lb N plus .45 oz Harmony Extra SG® was applied March 11, 2014. Harvest occurred June 16, 2014.

Table 1. Summary of performance of entries in the Virginia Tech Hulless Barley Test, 2014 harvest.

Hulless Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)		Winter Survival (%)	
	(6)		(6)		(2)		(3)		(5)		(2)		(3)		(2)		(1)		(1)	
VA07H-35WS	93.3	+	58.4		121.0	+	36.2		2.7	+	4.3	+	1.5	-	3.3	+	6.5	+	89.5	
Amaze 10	90.4	+	58.4		120.9	+	36.8	+	2.5	+	4.5	+	1.4	-	3.3	+	5.8	+	91.0	
VA06H-25	90.3	+	58.4		121.8	+	35.6		3.2	+	4.0		2.7		2.1		6.5	+	86.3	
VA10H-64	86.0	+	56.7	-	116.5	-	31.2	-	1.8		2.6		3.3		0.6	-	1.3	-	76.3	-
VA10H-49	85.6	+	57.0	-	116.9	-	34.7		2.0		2.8		3.5		0.3	-	2.8		83.8	
VA10H-34	85.2	+	57.1	-	119.4		35.2		2.5	+	1.4	-	5.5	+	1.4		4.5		89.3	
VA11H-34	84.6	+	58.3		120.6	+	32.3	-	1.4	-	1.1	-	1.6	-	0.3	-	1.3	-	92.5	
VA06H-79	82.5		57.1	-	120.3	+	34.0		1.9		8.4	+	0.8	-	0.5	-	4.0		88.3	
Doyce	81.3		55.6	-	117.8	-	32.4	-	3.1	+	2.6		5.8	+	1.6		6.5	+	91.8	
VA08H-65	81.1		58.9	+	119.0		35.6		1.8		2.6		3.4		1.1		4.8		88.3	
Dan	79.9		59.8	+	119.0		34.9		1.8		3.8		2.1	-	2.1		1.8		91.0	
VA11H-94WS	79.4		57.4	-	115.9	-	36.8	+	2.3		2.4		2.5		0.6	-	4.3		91.0	
VA09H-110(2R)	79.2		58.7	+	120.5	+	36.2		2.1		3.4		3.7		1.8		2.3		96.5	+
VA10H-57	77.4		58.2		119.6		35.5		2.7	+	2.3		6.3	+	0.0	-	2.3		83.8	
VA12H-34	77.2		56.7	-	123.8	+	33.3	-	2.7	+	1.4	-	4.3	+	1.4		5.5	+	91.3	
VA08H-5BS	76.9		57.9		120.5	+	36.5	+	1.0	-	3.1		1.4	-	2.5	+	2.3		91.5	
VA11H-89WS	76.5		58.2		115.9	-	36.9	+	2.3		2.3		1.9	-	0.9		3.5		91.5	
VA09H-112(2R)	76.3		59.4	+	120.5	+	35.2		1.2	-	2.4		3.7		1.8		0.8	-	93.3	
Eve	76.3		58.4		115.1	-	33.3	-	1.7		4.6	+	5.6	+	1.3		2.3		86.5	
VA10H-29	75.7		58.1		117.5	-	35.4		3.3	+	1.4	-	5.1	+	0.3	-	2.8		81.3	-
VA08H-79WS	75.6	-	55.8	-	122.4	+	35.3		1.6		8.1	+	1.3	-	7.4	+	2.3		89.5	
VA10H-79WS(2R)	75.5		59.4	+	122.6	+	38.0	+	1.2	-	2.3		5.1	+	1.9		2.8		95.5	
VA11H-97WS	74.6	-	58.1		116.4	-	36.9	+	2.1		2.9		2.5		0.5	-	3.8		86.5	

Table 1. Summary of performance of entries in the Virginia Tech Hulless Barley Test, 2014 harvest, cont'd.

Hulless Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)		Winter Survival (%)	
	(6)		(6)		(2)		(3)		(5)		(2)		(3)		(2)		(1)		(1)	
VA11H-63	72.6	-	58.4		118.8	-	36.0		2.8	+	2.0	-	2.8		2.6	+	3.0		87.0	
VA12HFHB-89(2R)	70.5	-	58.3		119.6		34.1		0.5	-	2.3		1.7	-	0.5	-	0.8	-	91.0	
VA12HFHB-93(2R)	68.6	-	58.5	+	119.1		33.8	-	0.5	-	2.6		1.5	-	0.4	-	1.3	-	89.5	
VA12HFHB-90(2R)	66.1	-	58.8	+	120.8	+	35.6		0.5	-	2.1	-	1.3	-	0.3	-	0.5	-	93.3	
Average	79.2		58.0		119.3		35.1		2.0		3.1		3.0		1.5		3.2		89.1	
LSD (0.05)	3.8		0.5		0.6		1.2		0.4		0.9		0.7		0.8		1.7		6.6	
C.V.	7.9		1.4		0.5		4.1		37.4		30.4		29.7		54.0		39.0		5.3	

Released cultivars are shown in bold print. The number in parentheses below column headings indicates the number of locations on which data are based. Varieties are ordered by descending yield averages. A + or - indicates a performance significantly above or below the test average. The 0-9 ratings indicate a genotype's response to disease or lodging where 0 = highly resistant and 9 = highly susceptible.
WS indicates white seed and (2R) indicates a 2-row type.

Table 2. Two year average summary of performance of entries in the Virginia Tech Hulless Barley Tests, 2013 and 2014 harvests.

Hulless Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)		Winter Survival (%)	
	(11)		(11)		(4)		(6)		(10)		(5)		(5)		(5)		(2)		(2)	
Amaze 10	89.5	+	57.7		117.8	+	36.1	+	3.3		4.2		1.4	-	4.3	+	3.5		90.4	
VA07H-35WS	89.2	+	57.6		118.3	+	35.7	+	3.4		4.1		1.4	-	4.2	+	4.3	+	87.9	
VA06H-25	86.5	+	57.5		119.0	+	35.1		3.6	+	4.2		2.2	-	3.8	+	4.8	+	86.9	
VA10H-34	85.6	+	56.8	-	116.6		34.5		3.2		2.1	-	5.4	+	2.1		3.4		89.6	
VA10H-64	84.1	+	56.4	-	114.3	-	30.6	-	2.5	-	3.2		2.9		1.0	-	0.8	-	80.6	
VA08H-65	82.5		58.3	+	116.4		34.4		3.0		3.2		2.6		0.7	-	3.0		89.8	-
VA06H-79	82.3		56.7	-	117.7	+	34.0		2.7		8.0	+	0.8	-	0.7	-	2.8		89.1	-
VA09H-110(2R)	80.2		57.5		118.2	+	35.9	+	3.2		4.2		3.2		1.3	-	2.0		88.9	
VA11H-97WS	79.9		57.6		113.5	-	35.8	+	3.0		2.4	-	2.2	-	1.0	-	2.0		91.6	
Dan	79.6		59.3	+	117.0		33.9	-	2.5	-	3.6		1.8	-	1.6		0.9	-	92.8	
VA11H-89WS	79.3		57.4		113.3	-	35.5		3.2		2.0	-	1.8	-	1.1	-	2.5		91.3	
VA08H-5BS	78.8		57.7		117.6	+	36.3	+	2.0	-	3.4		1.3	-	3.3	+	1.3		90.8	
VA10H-57	78.3		57.5		117.1		34.7		3.0		2.5	-	6.1	+	0.4	-	1.4		82.5	+
Doyce	78.1		54.2	-	115.4	-	32.3	-	4.3	+	4.6	+	5.6	+	2.1		5.0	+	90.9	
VA10H-79WS(2R)	77.8		58.3	+	120.6	+	37.4	+	2.2	-	3.6		5.6	+	1.7		2.6		94.9	-
VA10H-29	77.1	-	57.4		115.1	-	34.8		3.7	+	1.9	-	4.9	+	1.5		1.9		83.1	
VA09H-112(2R)	76.9	-	58.6	+	118.2	+	35.3		2.1	-	3.7		3.9	+	1.2	-	1.6		92.8	
VA11H-63	76.3	-	58.0	+	116.1	-	35.3		3.4		1.9	-	2.0	-	1.9		1.6		86.6	

Table 2. Two year average summary of performance of entries in the Virginia Tech Hulless Barley Tests, 2013 and 2014 harvests, cont'd.

Hulless Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)		Winter Survival (%)	
	(11)		(11)		(4)		(6)		(10)		(5)		(5)		(5)		(2)		(2)	
Eve	75.7	-	57.4		111.9	-	32.3	-	3.2		4.5	+	5.6	+	1.1	-	2.4		91.6	
VA08H-79WS	72.2	-	55.3	-	121.4	+	34.9		3.2		7.6	+	0.9	-	7.9	+	1.8		92.0	
Average	80.5		57.4		116.8		34.7		3.0		3.7		3.1		2.1		2.5		89.2	
LSD (0.05)	3.3		0.4		0.5		0.9		0.4		0.6		0.6		0.7		1.4		4.7	
C.V.	9.4		1.5		0.7		4.3		31.9		24.9		30.8		51.9		57.0		5.4	

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

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

WS indicates white seed and (2R) indicates a 2-row type.

Table 3. Three year average summary of performance of entries in the Virginia Tech Hulless Barley Tests, 2012, 2013, and 2014 harvests.

Hulless Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)	
	(17)		(17)		(7)		(9)		(16)		(1)		(8)		(7)		(7)		(2)	
Amaze 10	89.7	+	57.00		110.5	+	36.3	+	3.3		3.8	+	3.9		2.0	-	4.1	+	3.5	
VA06H-25	89.0	+	56.88		110.8	+	35.5	+	3.4	+	5.0	+	3.9		2.6		3.6	+	4.8	+
VA07H-35WS	88.5	+	56.93		111.1	+	36.0	+	3.5	+	4.0	+	3.8		1.9	-	3.5	+	4.3	+
VA08H-65	87.7	+	57.89	+	108.0	-	34.4		3.0		1.5		3.1	-	3.1		0.6	-	3.0	
VA10H-64	87.5	+	55.80	-	106.0	-	31.1	-	2.8		0.0		3.1	-	3.6		0.9	-	0.8	-
Dan	84.9		58.84	+	109.5		33.9	-	2.8		0.0		3.4	-	2.5		1.6		0.9	-
VA06H-79	83.8		56.14	-	111.2	+	34.6		2.8		0.0		8.0	+	1.0	-	0.6	-	2.8	
Doyce	83.4		54.12	-	107.2	-	32.9	-	4.5	+	0.0		4.8		5.9	+	1.9		5.0	+
VA09H-110(2R)	81.9		56.92		111.3	+	35.6	+	3.0		0.0		3.9		4.0	+	0.9	-	2.0	
VA08H-5BS	81.7		57.40	+	110.1		36.9	+	1.9	-	2.0		3.4	-	2.0	-	2.7		1.3	-
Eve	80.6	-	57.31	+	105.3	-	32.8	-	3.1		0.0		4.0		5.3	+	0.9	-	2.4	
VA09H-112(2R)	77.3	-	57.99	+	110.8	+	35.2		2.1	-	1.0		3.5	-	4.1	+	1.3	-	1.6	
VA08H-79WS	74.5	-	55.07	-	114.9	+	35.2		3.0		0.0		7.4	+	1.6	-	7.1	+	1.8	
Average	83.9		56.79		109.7		34.6		3.0		1.3		4.3		3.1		2.3		2.6	
LSD (0.05)	3.0		0.36		0.5		0.7		0.4		2.0		0.6		0.7		0.8		1.3	
C.V.	10.1		1.84		0.8		4.0		38.4		105.8		25.3		40.6		63.1		50.3	

Released cultivars are shown in bold print. The number in parentheses below column headings indicates the number of location-years on which data are based. Varieties are ordered by descending yield averages. A + or - indicates a performance significantly above or below the test average. The 0-9 ratings indicate a genotype's response to disease or lodging where 0 = highly resistant and 9 = highly susceptible.
WS indicates white seed and (2R) indicates a 2-row type.

Table 4. Summary of performance of entries in the Virginia Tech Hulless Barley Test, Southern Piedmont AREC, Blackstone, VA, 2014 harvest.

Hulless Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Lodging (0-9)	
VA10H-34	---		64.3		73.6	+	55.8	-	2.3	
VA10H-57	---		69.6		68.7		59.3		3.5	
VA10H-64	74.1		72.7	+	68.6		57.5		1.8	
VA07H-35WS	65.8		62.1		67.8		59.2		3.3	
Doyce	72.4		66.1		67.3		56.9		2.5	
VA06H-25	65.9		62.1		66.8		59.1		3.8	+
Amaze 10	72.4		68.8		66.8		58.9		4.0	+
VA11H-34	---		---		66.7		59.0		3.8	+
VA12HFHB-93(2R)	---		---		64.5		59.3		1.0	-
VA09H-110(2R)	69.9		64.9		64.5		58.8		2.8	
VA08H-5BS	65.3		57.8		62.2		55.4	-	2.5	
VA06H-79	67.7		60.4		61.7		57.4		2.3	
VA12H-34	---		---		61.7		57.8		2.5	
VA08H-65	74.2		67.1		60.6		59.3		2.0	
VA10H-79WS(2R)	---		63.8		60.6		59.8		1.5	-
VA11H-94WS	---		---		59.6		58.3		4.3	+
VA11H-97WS	---		67.7		59.0		59.3		3.8	+
VA08H-79WS	61.2	-	54.8	-	58.2		56.8		2.3	
VA09H-112(2R)	61.5	-	60.7		58.1		59.2		2.3	
VA10H-49	---		---		57.7		58.4		2.0	
Dan	71.2		65.7		57.7		60.3		2.0	
VA12HFHB-89(2R)	---		---		57.2		59.5		1.0	-
Eve	70.6		66.0		56.9		58.8		1.5	-
VA11H-89WS	---		59.5		56.5		59.5		4.5	+
VA10H-29	---		54.8	-	54.6		58.2		4.0	+
VA11H-63	---		51.1	-	53.2		58.7		3.0	
VA12HFHB-90(2R)	---		---		52.7	-	59.6		1.0	-
Average	68.6		63.0		61.6		58.5		2.6	
LSD (0.05)	6.5		7.6		8.8		2.4		1.0	
C.V.	11.2		11.4		9.3		2.7		26.2	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

WS indicates white seed and (2R) indicates a 2-row type.

Table 5. Summary of performance of entries in the Virginia Tech Hulless Barley Test, Tidewater AREC, Holland, VA, 2014 harvest.

Hulless Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Lodging (0-9)	
Doyce	78.1		75.5	+	75.5	+	54.6	-	5.5	+
VA06H-25	76.0		72.6		72.6		56.8		4.5	
VA08H-79WS	66.9		72.0		72.0		55.1	-	2.5	-
VA06H-79	77.8		71.7		71.7		56.9		2.3	-
Amaze 10	73.5		71.5		71.5		56.9		3.8	
VA11H-34	---		---		70.0		58.1		2.5	-
VA10H-49	---		---		69.8		57.0		5.3	+
Dan	78.2		69.2		69.2		60.1	+	3.8	
VA11H-89WS	---		69.0		69.0		58.0		5.3	+
VA07H-35WS	75.8		68.6		68.6		56.8		4.5	
VA10H-79WS(2R)	---		67.7		67.7		57.4		3.0	
VA10H-34	---		66.9		66.9		56.5	-	5.0	+
VA11H-94WS	---		---		66.9		57.5		4.8	
VA08H-5BS	67.0		66.9		66.9		58.5	+	2.0	-
VA09H-110(2R)	69.3		66.1		66.1		59.0	+	4.5	
VA10H-64	69.3		66.0		66.0		56.5	-	4.3	
VA08H-65	71.4		65.9		65.9		59.0	+	3.0	
VA12H-34	---		---		64.1		55.9	-	4.5	
Eve	69.6		64.0		64.0		58.3		4.5	
VA09H-112(2R)	63.2	-	60.5		60.5		59.9	+	3.0	
VA11H-97WS	---		59.7		59.7		57.3		4.5	
VA10H-29	---		59.3		59.3		57.6		5.0	+
VA10H-57	---		57.7		57.7		57.5		5.8	+
VA12HFHB-90(2R)	---		---		57.0		58.8	+	1.0	-
VA11H-63	---		55.8	-	55.8	-	57.4		6.8	+
VA12HFHB-89(2R)	---		---		54.9	-	58.1		1.0	-
VA12HFHB-93(2R)	---		---		49.4	-	59.0	+	1.0	-
Average	72.0		66.3		65.1		57.6		3.8	
LSD (0.05)	6.2		9.0		8.9		0.9		1.1	
C.V.	8.5		9.3		9.3		1.0		20.1	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

WS indicates white seed and (2R) indicates a 2-row type.

Table 6. Summary of performance of entries in the Virginia Tech Hulless Barley Test, Eastern Virginia AREC, Warsaw, VA, 2014 harvest.

Hulless Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)	
Amaze 10	114.4	+	107.7	+	112.0	+	58.0		119.0	+	38.3		3.3		2.8		1.8	-	0.8		5.8	+
VA10H-49	---		---		111.6	+	56.8	-	112.5	-	36.8		3.3		2.3		5.3		0.0		2.8	
VA06H-25	114.7	+	107.8	+	111.4	+	58.1		120.5	+	36.5		5.8	+	3.3		1.3	-	0.5		6.5	+
VA07H-35WS	113.4	+	110.7	+	111.2	+	58.1	+	119.0	+	37.5		4.0		2.5		1.3	-	0.8		6.5	+
VA06H-79	105.3	+	103.8	+	106.3	+	57.0		117.5	+	36.5		3.3		8.0	+	0.8	-	0.0		4.0	
VA11H-34	---		---		104.3		57.9		118.3	+	34.8	-	0.3	-	0.8	-	2.5	-	0.0		1.3	-
VA11H-89WS	---		100.8	+	102.7		57.2		113.0	-	37.3		1.8		1.8		2.8	-	0.0		3.5	
VA10H-34	---		98.0		102.0		57.1		115.3	-	36.5		4.8	+	1.0	-	8.0	+	0.0		4.5	
VA08H-65	103.2		95.0		101.6		58.6	+	115.0	-	36.5		4.3		2.0		4.5		0.0		4.8	
VA10H-64	103.3		94.4		100.5		56.6	-	113.0	-	33.8	-	2.8		2.5		5.0		0.0		1.3	-
VA08H-79WS	87.6	-	86.5	-	98.5		54.8	-	120.3	+	38.0		2.0		7.3	+	0.8	-	6.8	+	2.3	
VA11H-97WS	---		96.3		97.9		57.7		114.0	-	38.5		2.5		2.5		2.5	-	0.0		3.8	
Doyce	92.6	-	83.3	-	97.7		55.1	-	114.0	-	34.5	-	7.3	+	1.8		7.8	+	0.0		6.5	+
VA12H-34	---		---		97.2		56.5	-	120.8	+	35.3	-	4.5		0.5	-	7.3	+	0.0		5.5	+
Dan	94.6	-	84.5	-	97.1		58.9	+	115.8		37.3		2.5		2.0		2.8	-	0.0		1.8	
VA11H-94WS	---		---		96.7		56.8	-	113.3	-	38.8	+	2.8		2.0		3.3		0.0		4.3	
VA10H-29	---		97.9		96.6		58.1		113.5	-	37.3		5.8	+	1.0	-	6.8	+	0.0		2.8	
VA09H-110(2R)	96.3		93.7		96.4		58.0		117.3	+	38.0		3.3		2.5		5.8	+	0.0		2.3	
VA09H-112(2R)	96.0		94.5		95.9		58.9	+	117.0		37.8		1.0	-	1.0	-	5.5	+	0.0		0.8	-
VA11H-63	---		95.2		95.2		58.0		115.3	-	38.0		4.5		1.5		3.8		0.3		3.0	
VA10H-79WS(2R)	---		90.1		91.5		59.0	+	120.5	+	40.8	+	1.3		1.3		7.0	+	0.0		2.8	
VA08H-5BS	97.5		93.2		90.2		57.9		118.0	+	39.5	+	0.5	-	2.0		1.8	-	0.3		2.3	
Eve	80.2	-	78.2	-	87.9	-	58.1	+	112.0	-	34.3	-	1.8		3.3		7.5	+	0.0		2.3	
VA12HFHB-89(2R)	---		---		84.0	-	57.3		116.5		36.5		0.3	-	1.8		2.5	-	0.0		0.8	-

Table 6. Summary of performance of entries in the Virginia Tech Hulless Barley Test, Eastern Virginia AREC, Warsaw, VA, 2014 harvest, cont'd.

Hulless Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)	
VA10H-57	---		77.5	-	83.8	-	57.6		116.0		37.0		5.3	+	2.0		8.8	+	0.0		2.3	
VA12HFHB-93(2R)	---		---		82.5	-	57.4		115.3	-	36.0		0.0	-	2.8		1.5	-	0.0		1.3	-
VA12HFHB-90(2R)	---		---		75.6	-	57.7		118.0	+	38.3		0.0	-	1.5		1.8	-	0.0		0.5	-
Average	99.9		94.4		97.3		57.5		116.3		37.0		2.9		2.3		4.1		0.3		3.2	
LSD (0.05)	5.3		6.2		7.4		0.5		0.8		1.6		1.7		1.3		1.3		0.5		1.7	
C.V.	6.1		6.5		5.3		0.7		0.5		3.1		42.0		38.1		22.3		97.6		39.0	

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.

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

WS indicates white seed and (2R) indicates a 2-row type.

Table 7. Summary of performance of entries in the Virginia Tech Hulless Barley Test, Eastern Shore AREC, Painter, VA, 2014 harvest.

Hulless Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Net Blotch (0-9)		Powdery Mildew (0-9)	
VA07H-35WS	92.2	+	88.2	+	96.8	+	57.8		0.8	-	5.8	+
VA11H-94WS	---		---		86.0	+	56.4		1.0	-	1.3	
VA06H-25	84.8		79.3		85.4		57.3		4.0	+	3.8	
VA10H-64	83.5		75.9		80.2		55.6	-	3.0		1.3	
Amaze 10	82.9		77.6		78.0		58.1		0.8	-	5.8	+
VA10H-79WS(2R)	---		78.2		77.7		58.7	+	3.8	+	3.8	
Dan	87.3		78.3		76.8		59.2	+	0.8	-	4.3	+
VA12HFHB-89(2R)	---		---		76.0		56.3		1.0	-	1.0	-
VA09H-112(2R)	75.5		71.1		75.9		59.1	+	2.8		3.5	
Eve	79.9		69.2		75.8		57.1		4.3	+	2.5	
VA10H-49	---		---		75.4		55.9	-	3.5		0.5	-
Doyce	85.3		75.1		75.0		54.7	-	4.8	+	3.3	
VA10H-34	---		77.4		73.8		57.4		4.0	+	2.8	
VA12HFHB-93(2R)	---		---		73.3		56.6		0.8	-	0.8	-
VA06H-79	74.5		68.6		73.0		57.0		0.5	-	1.0	-
VA09H-110(2R)	80.2		74.5		72.0		58.1		2.8		3.5	
VA11H-34	---		---		71.5		57.8		1.0	-	0.5	-
VA11H-89WS	---		75.3		71.5		57.0		0.8	-	1.8	
VA11H-97WS	---		72.0		71.5		57.2		1.5		1.0	-
VA10H-57	---		73.8		69.6		56.7		6.3	+	0.0	-
VA12HFHB-90(2R)	---		---		69.4		57.3		0.3	-	0.5	-
VA11H-63	---		70.4		68.2		57.8		1.8		5.0	+
VA12H-34	---		---		68.0		55.8	-	3.3		2.8	
VA08H-79WS	67.2	-	61.5	-	65.9		55.6	-	1.8		8.0	+
VA08H-5BS	76.4		68.5		64.8		57.8		0.3	-	4.8	+
VA08H-65	79.0		67.4		62.6		58.4	+	4.5	+	2.3	
VA10H-29	---		61.1	-	60.3	-	57.7		3.8	+	0.5	-
Average	80.7		73.2		73.9		57.2		2.3		2.6	
LSD (0.05)	7.3		8.5		12.2		1.1		1.3		1.5	
C.V.	10.9		11.2		11.5		1.3		40.6		41.3	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.
WS indicates white seed and (2R) indicates a 2-row type.

Table 8. Summary of performance of entries in the Virginia Tech Hulless Barley Test, Northern Piedmont Center, Orange, VA, 2014 harvest.

Hulless Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Height (In)		Lodging (0-9)	
VA10H-49	---		---		106.6	+	58.1	-	36.0		0.0	
VA10H-64	91.8		80.9		99.8	+	58.6	-	32.5	-	0.0	
VA07H-35WS	87.1		81.0		99.7	+	61.4	+	37.3		0.0	
VA06H-25	90.3		79.4		95.8	+	61.4	+	37.0		0.0	
Amaze 10	87.9		83.9		92.9	+	61.3	+	38.8		0.0	
VA10H-57	---		83.6		89.9		60.7		38.3		0.0	
VA10H-29	---		75.3		85.7		59.2		37.3		0.8	+
VA10H-34	---		85.5	+	84.9		58.9		36.5		0.0	
VA08H-65	94.5	+	84.6		84.4		60.1		37.5		0.0	
Eve	85.8		77.9		83.5		59.8		35.0		0.0	
VA06H-79	86.0		74.4		80.8		58.5	-	33.8	-	0.0	
Dan	88.3		80.3		80.1		61.2	+	36.3		0.0	
VA11H-34	---		---		79.8		59.6		33.0	-	0.0	
Doyce	87.5		78.7		78.8		57.6	-	33.5	-	0.0	
VA09H-112(2R)	76.7	-	71.6		75.6		60.6		36.3		0.0	
VA12H-34	---		---		75.4		58.5	-	35.0		0.0	
VA08H-5BS	79.3	-	70.1		74.9		60.4		36.5		0.0	
VA09H-110(2R)	80.2		72.7		73.5		59.8		37.5		0.0	
VA08H-79WS	79.9		72.3		72.6		57.2	-	36.5		0.0	
VA11H-63	---		79.1		72.0		60.7		38.0		0.0	
VA11H-94WS	---		---		69.8		59.3		39.3	+	0.0	
VA11H-97WS	---		72.1		67.9		60.2		39.3	+	0.0	
VA11H-89WS	---		66.1	-	66.3		59.9		41.0	+	0.0	
VA10H-79WS(2R)	---		68.3	-	63.4	-	62.5	+	38.5		0.0	
VA12HFHB-89(2R)	---		---		55.5	-	61.3	+	34.3		0.0	
VA12HFHB-93(2R)	---		---		51.2	-	61.2	+	34.8		0.0	
VA12HFHB-90(2R)	---		---		46.6	-	61.2	+	36.8		0.0	
Average	85.8		76.9		78.1		60.0		36.5		0.0	
LSD (0.05)	6.1		7.9		13.2		1.1		2.7		0.4	
C.V.	8.2		9.5		10.3		1.1		5.3		1039.2	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

WS indicates white seed and (2R) indicates a 2-row type.

Table 9. Summary of performance of entries in the Virginia Tech Hulless Barley Test, Kentland Farm, Blacksburg, VA, 2014 harvest.

Hulless Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Winter Survival (%)	
VA11H-34	---		---		112.3	+	57.5		123.0		29.3	-	1.8		1.5	-	1.3	-	92.5	
VA06H-25	96.3		107.4	+	111.3	+	58.2		123.0		33.3		5.0	+	4.8		2.8		86.3	
VA07H-35WS	93.1		105.1		110.9	+	57.9		123.0		33.8	+	4.3	+	6.0	+	2.5		89.5	
Amaze 10	99.2	+	111.1	+	110.6	+	58.0		122.8		33.3		4.0	+	6.3	+	1.8		91.0	
VA06H-79	92.0		107.4	+	108.0	+	56.1	-	123.0		31.8		3.5	+	8.8	+	1.3	-	88.3	
VA08H-65	98.6	+	103.4		107.5	+	58.7	+	123.0		32.8		1.5		3.3		1.3	-	88.3	
VA10H-34	---		105.7	+	104.0	+	57.1	-	123.5	+	32.5		2.8		1.8	-	4.5	+	89.3	
VA10H-49	---		---		102.9		56.4	-	121.3		31.3		1.5		3.3		1.8		83.8	
VA09H-110(2R)	93.5		101.5		102.4		58.7	+	123.8	+	33.0		2.3		4.3		2.5		96.5	
VA10H-29	---		102.9		100.5		57.9		121.5		31.8		4.3	+	1.8	-	4.8	+	81.3	+
VA10H-64	96.2		101.2		100.2		56.1	-	120.0	-	27.3	-	1.8		2.8		1.8		76.3	
Dan	88.7		95.3		97.1		59.4	+	122.3		31.3		2.3		5.5	+	2.8		91.0	-
VA11H-63	---		99.5		96.8		58.3		122.3		32.0		2.5		2.5		2.8		87.0	
VA12H-34	---		---		96.6		56.5	-	126.8	+	29.5	-	4.5	+	2.3	-	2.5		91.3	
VA08H-5BS	98.1		103.9		95.6		57.8		123.0		33.5	+	1.0	-	4.3		2.3		91.5	
VA10H-57	---		96.2		93.5		57.7		123.3	+	31.3		1.5		2.5		3.8		83.8	
VA10H-79WS(2R)	---		94.1		93.0		59.6	+	124.8	+	34.8	+	1.5		3.3		4.5	+	95.5	
VA11H-89WS	---		100.3		92.8		57.9		118.8	-	32.5		2.0		2.8		2.3		91.5	
VA09H-112(2R)	89.0		94.1		91.8		59.2	+	124.0	+	31.5		1.0	-	3.8		2.8		93.3	
VA11H-94WS	---		---		91.6		57.0	-	118.5	-	32.3		1.8		2.8		3.3		91.0	-
VA11H-97WS	---		98.6		91.4	-	57.7		118.8	-	33.0		2.0		3.3		3.5		86.5	
Eve	93.5		91.1	-	91.2	-	58.6	+	118.3	-	30.8		2.3		6.0	+	5.0	+	86.5	
Doyce	84.2	-	88.6	-	90.6	-	54.7	-	121.5		29.3	-	3.5	+	3.5		5.0	+	91.8	
VA08H-79WS	80.1	-	81.5	-	89.0	-	55.5	-	124.5	+	31.5		2.8		9.0	+	1.3	-	89.5	

Table 9. Summary of performance of entries in the Virginia Tech Hulless Barley Test, Kentland Farm, Blacksburg, VA, 2014 harvest, cont'd.

Hulless Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Winter Survival (%)	
VA12HFHB-89(2R)	---		---		87.8	-	58.0		122.8		31.5		1.0	-	2.8		1.5	-	91.0	
VA12HFHB-90(2R)	---		---		81.5	-	59.0	+	123.5	+	31.8		1.0	-	2.8		1.8		93.3	
VA12HFHB-93(2R)	---		---		79.5	-	58.9	+	123.0		30.5		1.0	-	2.5		2.3		89.5	
Average	92.5		99.4		97.4		57.7		122.4		31.7		2.4		3.8		2.7		89.1	
LSD (0.05)	5.8		5.7		5.8		0.6		0.8		1.6		1.1		1.4		1.2		6.6	
C.V.	7.6		5.7		4.2		0.5		0.5		3.7		32.2		25.7		31.3		5.3	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

WS indicates white seed and (2R) indicates a 2-row type.

Table 10. Summary of performance of barley entries in the Virginia Tech Barley Test, 2014 harvest.

Barley Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)		Winter Survival (%)		Awns[1]
	(6)		(6)		(2)		(3)		(5)		(2)		(3)		(2)		(1)		(1)		
VA12B-8	110.1	+	48.9		119.4	+	36.5	+	2.5		5.6	+	2.4		0.6		1.0	-	91.5		SA
Thoroughbred	109.4	+	49.3		121.8	+	35.0		3.1		6.3	+	3.3	+	2.5	+	2.8		91.5		LA
VA11B-4	108.1	+	50.1	+	119.5	+	33.4		3.3		3.0		1.4	-	0.3		5.3	+	83.0	-	SA
VA11B-141	107.6	+	50.1	+	119.1	+	37.3	+	2.4	-	1.1	-	1.8	-	0.1		2.0		88.3		LA
VA11B-102	107.4	+	48.8		119.8	+	36.6	+	3.9	+	2.3		1.2	-	0.5		2.0		95.0	+	LA
VA10B-43	106.5	+	48.7		120.0	+	34.5		3.2		1.1	-	0.9	-	0.3		5.5	+	85.0		SA
VA11B-71	106.1	+	48.7		117.6		32.0	-	2.8		0.8	-	1.8		0.4		5.8	+	87.0		SA
VA11B-126	106.0	+	50.4	+	115.6	-	35.1		2.8		1.6		2.9		0.4		1.3	-	95.5	+	LA
VA11B-41	105.1		48.4		119.4	+	34.3		2.4	-	1.1	-	1.3	-	0.4		2.5		86.0		SA
VA12B-7	104.1		49.8	+	120.1	+	35.5	+	1.8	-	7.1	+	2.8		0.8		1.8		90.8		LA
VA11B-8	104.0		49.8	+	116.3	-	32.3	-	3.7		1.0	-	1.8		0.3		8.0	+	90.3		LA
VA11B-130	103.4		51.3	+	115.6	-	35.5	+	2.5		1.0	-	2.7		0.5		1.0	-	93.0		LA
VA08B-108	103.4		48.1	-	115.4	-	31.9	-	3.4		2.4		3.1		0.4		4.3		87.8		SA
VA11B-10	103.2		48.8		119.8	+	33.2		4.1	+	1.4	-	1.3	-	0.3		7.3	+	87.0		SA
Secretariat	102.5		49.0		115.8	-	31.5	-	3.8	+	0.6	-	2.9		0.3		4.5		85.8		SA
VA11B-143	102.4		50.2	+	117.9		35.7	+	2.6		1.1	-	1.8	-	0.6		2.0		87.5		LA
VA11B-63	102.3		49.4		115.3	-	32.5	-	1.8	-	0.8	-	3.3	+	0.8		2.3		87.3		SA
VA11B-56	102.1		48.2	-	119.8	+	34.4		3.1		2.5		3.3	+	1.0		2.3		93.8		LA
VA10-BYA7-692	101.8		48.1	-	120.0	+	32.0	-	3.3		1.0	-	3.2		0.8		3.0		92.5		LA
VA11B-55	101.2		47.8	-	120.1	+	33.3		1.7	-	3.4	+	3.4	+	0.6		0.8	-	91.0		LA
VA11B-140	100.7		50.8	+	117.0	-	38.8	+	1.8	-	1.1	-	1.9		0.4		3.0		83.5	-	LA
VA10-BYA7-782	100.2		49.5		118.6	+	34.9		2.7		1.1	-	2.3		0.9		1.0	-	94.3		LA
VA10B-11	100.1		48.3	-	117.4		32.2	-	4.0	+	1.3	-	1.4	-	0.4		4.8		90.8		SA
VA10-BYA7-781	100.1		49.6		115.3	-	34.2		2.5		2.1		2.8		1.0		3.5		95.0	+	LA
VA11B-36	99.9		47.9	-	117.5		34.4		3.3		1.1	-	2.6		0.1		3.8		86.8		SA

Table 10. Summary of performance of barley entries in the Virginia Tech Barley Test, 2014 harvest, cont'd.

Barley Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)		Winter Survival (%)		Awns[1]
	(6)		(6)		(2)		(3)		(5)		(2)		(3)		(2)		(1)		(1)		
VA11B-15	99.6		48.4		115.4	-	32.6	-	3.8	+	1.8		2.9		0.9		8.0	+	87.3		SA
VA11B-165	99.3		49.3		119.1	+	35.6	+	3.0		1.3	-	1.5	-	1.4	+	1.8		89.5		LA
VA10B-3	99.3		49.5		119.9	+	29.8	-	3.8	+	1.1	-	2.0		0.4		4.5		86.0		SA
VA11B-134	98.8		49.3		117.4		34.7		4.2	+	1.0	-	3.4	+	0.5		2.5		87.8		LA
VA10-BYA7-784	98.5		49.1		118.6	+	35.1		2.5		1.0	-	2.1		0.6		0.8	-	95.5	+	LA
VA08B-95	98.5		47.4	-	116.0	-	33.6		4.5	+	1.5		1.7	-	2.8	+	6.8	+	87.0		SA
Atlantic	98.5		48.8		114.8	-	32.0	-	3.9	+	4.0	+	3.5	+	0.4		3.3		86.5		SA
Price	98.1		48.6		116.9	-	32.3	-	3.5		4.1	+	4.3	+	0.3		3.0		87.3		SA
VA08B-84	98.1		49.5		115.8	-	31.3	-	3.7		0.6	-	2.8		0.3		4.0		88.8		SA
VA08B-109	97.9		48.7		116.6	-	32.4	-	4.3	+	1.5		1.7	-	0.3		6.8	+	83.8	-	SA
VA10B-9	97.5		50.5	+	115.3	-	32.1	-	2.4	-	1.4	-	1.8		0.4		1.8		87.0		SA
VA09B-35	96.6		49.8	+	116.0	-	33.5		3.1		2.4		1.3	-	0.4		2.3		88.8		LA
VA09B-34	95.8		50.7	+	115.3	-	34.9		2.2	-	1.1	-	1.8		0.3		1.5	-	93.5		LA
Barsoy	93.7		49.3		116.0	-	35.4		3.6		6.5	+	3.2		0.5		2.3		87.3		LA
Violetta	92.3	-	49.1		123.0	+	31.9	-	1.9	-	0.1	-	1.7	-	0.5		0.3	-	94.0		LA
Callao	91.1	-	48.9		114.4	-	29.6	-	5.6	+	3.0		3.6	+	0.1		6.8	+	89.5		SA
Novosadski 183	88.1	-	51.3	+	119.0	+	31.5	-	2.0	-	4.8	+	5.1	+	1.1	+	0.5	-	92.3		LA
VA92-42-46	79.8	-	46.3	-	117.5		39.5	+	2.9		0.5	-	5.7	+	0.1		3.8		86.8		AL
Nomini	78.0	-	46.2	-	115.4	-	38.6	+	2.7		4.5	+	0.9	-	0.4		2.8		92.0		AL
Wysor	75.4	-	44.9	-	117.6		38.8	+	3.4		6.8	+	3.7	+	0.0	-	4.3		95.8	+	AL
Average	99.4		49.0		117.6		34.0		3.1		2.2		2.5		0.6		3.3		89.5		
LSD (0.05)	5.9		0.6		0.6		1.4		0.6		0.9		0.7		0.5		1.8		5.4		
C.V.	9.8		2.1		0.5		5.1		32.0		38.6		33.6		86.1		38.9		4.3		

Released cultivars are shown in bold print. The number in parentheses below column headings indicates the number of locations on which data are based. 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 or lodging where 0 = highly resistant and 9 = highly susceptible.

[1] LA=long awned, SA=short awned, AL=awnletted or awnless.

Table 11. Two year average summary of performance of hulled entries in the Virginia Tech Barley Tests, 2013 and 2014 harvests.

Barley Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)		Winter Survival (%)	
	(11)		(11)		(4)		(6)		(10)		(5)		(5)		(5)		(2)		(2)	
VA11B-141	109.1	+	48.3	+	117.5	+	36.4	+	2.7	-	1.4	-	1.4	-	0.6	-	1.1	-	90.3	
VA11B-102	108.1	+	46.4	-	117.9	+	35.8	+	3.9		1.9		1.2	-	0.7		4.1		97.0	+
VA10B-43	108.1	+	47.2		118.4	+	34.0		3.1		1.2	-	0.9	-	0.6	-	5.0		87.5	
VA11B-4	107.1	+	47.9	+	117.3	+	31.9	-	3.5		2.5		1.3	-	0.6	-	6.0	+	85.3	-
VA11B-143	107.1	+	48.2	+	116.0		34.9	+	2.8	-	1.3	-	1.4	-	1.3		3.4		88.8	
Thoroughbred	106.4	+	46.7	-	119.9	+	34.0		3.1		6.1	+	2.9		4.8	+	2.9		92.5	
VA08B-108	106.3	+	46.8		113.9	-	31.2	-	3.7		1.9	-	2.9		0.6	-	5.5	+	92.4	
VA11B-126	106.2	+	48.0	+	114.2	-	33.7		3.3		1.3	-	2.6		0.5	-	2.5	-	97.4	+
Secretariat	106.1	+	47.8	+	113.9	-	31.1	-	4.0		0.6	-	2.6		0.5	-	6.0	+	92.6	
VA12B-7	105.8	+	48.2	+	118.0	+	34.5	+	2.1	-	7.0	+	2.4		1.5		1.8	-	90.9	
VA11B-140	105.2	+	48.9	+	115.1		38.1	+	2.4	-	1.4	-	1.7	-	1.4		2.9		84.9	-
VA11B-130	105.0	+	49.2	+	114.1	-	35.5	+	3.2		1.4	-	2.4		0.6	-	3.9		92.6	
VA11B-10	104.7	+	46.9		117.8	+	32.3		3.8		1.5	-	0.9	-	0.5	-	6.6	+	87.9	
VA11B-71	104.6		46.7		115.1		31.6	-	3.0		0.9	-	2.2		1.7	+	6.3	+	88.5	
VA11B-56	103.9		46.6	-	118.4	+	33.8		3.0	-	2.3		3.4	+	1.0		1.4	-	92.4	
VA11B-55	103.0		46.6	-	118.4	+	32.8		1.7	-	2.3		3.7	+	1.5		0.4	-	91.0	
VA11B-134	102.6		46.9		115.3		34.1		4.2	+	0.9	-	3.1	+	1.0		3.3		88.3	
VA10B-3	102.2		47.8	+	118.2	+	29.6	-	4.2	+	1.2	-	2.6		0.9		5.8	+	88.0	
VA09B-35	102.1		48.0	+	114.1	-	32.8		3.4		3.4	+	1.0	-	1.2		2.1	-	92.3	
VA11B-15	101.6		46.9		113.2	-	31.8	-	3.9		2.2		2.0		1.0		8.0	+	90.9	
VA11B-165	100.6		46.5	-	117.3	+	34.2		3.0		1.5	-	2.0		3.3	+	0.9	-	90.9	
VA10B-11	100.2		46.8		115.9		31.3	-	4.3	+	1.1	-	1.1	-	0.5	-	5.9	+	89.8	
VA08B-109	100.1		46.9		114.6	-	31.1	-	4.3	+	1.3	-	1.2	-	0.5	-	7.0	+	87.4	
VA08B-84	98.8		48.0	+	113.2	-	30.8	-	4.4	+	0.7	-	2.9		0.4	-	5.8	+	93.0	
VA09B-34	98.4		48.7	+	113.6	-	33.5		2.8	-	1.3	-	2.2		0.9		2.0	-	93.5	

Table 11. Two year average summary of performance of hulled entries in the Virginia Tech Barley Tests, 2013 and 2014 harvests, cont'd.

Barley Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)		Winter Survival (%)	
	(11)		(11)		(4)		(6)		(10)		(5)		(5)		(5)		(2)		(2)	
Atlantic	98.0		46.9		112.4	-	30.4	-	4.4	+	3.5	+	3.3	+	0.5	-	5.1		92.9	
VA10B-9	97.9		49.0	+	113.4	-	31.3	-	3.2		1.3	-	1.6	-	1.0		4.3		88.5	
VA08B-95	96.6		45.9	-	113.6	-	32.5		4.9	+	1.7	-	1.1	-	5.9	+	7.1	+	90.8	
Price	95.8	-	47.0		114.9	-	31.3	-	3.6		4.0	+	4.8	+	0.9		2.9		92.0	
Callao	93.2	-	46.7		112.0	-	28.9	-	5.9	+	3.2	+	2.7		0.5	-	7.5	+	92.0	
Barsoy	90.5	-	46.6	-	114.4	-	35.0	+	3.9		6.4	+	2.7		0.9		4.4		93.1	
Novosadski 183	88.0	-	49.1	+	117.4	+	30.9	-	2.2	-	5.1	+	4.3	+	0.9		1.9	-	87.4	
Wysor	86.4	-	43.4	-	115.4		37.5	+	3.7		6.3	+	3.5	+	0.3	-	5.0		95.8	+
Nomini	83.0	-	44.6	-	113.5	-	38.1	+	2.7	-	4.3	+	0.8	-	0.6	-	2.4	-	92.8	
VA92-42-46	80.7	-	45.0	-	115.6		38.6	+	3.2		0.7	-	6.0	+	0.3	-	2.6	-	89.5	
Average	100.4		47.2		115.5		33.3		3.5		2.4		2.3		1.1		4.1		90.9	
LSD (0.05)	4.5		0.5		0.5		1.0		0.5		0.5		0.6		0.5		1.4		3.7	
C.V.	9.8		2.2		0.6		5.3		32.7		34.7		41.4		66.3		34.5		4.1	

Released cultivars are shown in bold print. The number in parentheses below column headings indicates the number of location-years on which data are based. 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 or lodging where 0 = highly resistant and 9 = highly susceptible.

Table 12. Three year average summary of performance of hulled entries in the Virginia Tech Barley Tests, 2012, 2013, and 2014 harvests.

Barley Lines	Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)	
	(17)		(17)		(7)		(9)		(16)		(1)		(8)		(7)		(7)	
Secretariat	111.1	+	47.1		105.4		31.8	-	4.0		0.0		0.5	-	2.5		0.4	-
VA08B-108	108.9	+	46.6		105.1	-	31.9	-	3.8		0.0		1.5	-	3.0		0.5	-
Thoroughbred	108.0	+	46.4		111.3	+	34.7	+	3.3		1.0		6.0	+	3.0		4.5	+
Atlantic	105.5	+	46.8		103.9	-	31.5	-	4.6	+	0.0		3.2		3.1		0.4	-
VA08B-84	105.0	+	48.0	+	104.6	-	31.7	-	4.4	+	0.0		0.6	-	2.9		0.3	-
VA09B-35	104.8	+	47.6	+	105.4		33.4		3.3	-	0.0		3.3		1.3	-	1.0	
VA08B-109	104.4	+	46.5		105.9		31.7	-	4.2		0.0		1.2	-	1.7	-	0.4	-
Price	100.5		46.7		105.9		31.9	-	3.6		0.0		3.7	+	5.0	+	0.8	
VA09B-34	99.8		48.3	+	104.9	-	33.9		3.0	-	0.0		1.1	-	2.1	-	0.8	
VA08B-95	99.6		45.8		105.0	-	33.2		5.0	+	0.0		1.5	-	1.7	-	5.7	+
Callao	97.8		46.3		103.5	-	29.5	-	6.1	+	0.0		3.3		3.0		0.4	-
Nomini	94.2	-	44.6	-	104.4	-	38.5	+	2.3	-	0.0		3.8	+	1.2	-	0.5	-
Wysor	92.3	-	43.5	-	106.5	+	37.9	+	3.6		0.0		5.5	+	3.9	+	0.3	-
Barsoy	89.4	-	45.7	-	105.1	-	35.1	+	3.7		5.5	+	6.2	+	3.3		0.8	
VA92-42-46	88.4	-	44.9	-	106.4	+	38.9	+	3.2	-	0.0		0.6	-	6.4	+	0.3	-
Novosadski 183	84.3	-	48.1	+	108.4	+	31.0	-	2.7	-	5.8	+	4.1	+	4.9	+	0.7	
Average	99.6		46.4		105.7		33.5		3.8		0.8		2.9		3.1		1.1	
LSD (0.05)	4.1		0.7		0.4		0.8		0.5		0.8		0.4		0.5		0.4	
C.V.	11.3		4.0		0.7		4.9		37.2		70.4		30.9		30.2		67.4	

Released cultivars are shown in bold print. The number in parentheses below column headings indicates the number of location-years on which data are based. 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 or lodging where 0 = highly resistant and 9 = highly susceptible.

Table 13. Summary of performance of barley entries in the Virginia Tech Barley Test, Southern Piedmont AREC, Blackstone, VA, 2014 harvest.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Lodging (0-9)	
Thoroughbred	97.5	+	93.7	+	95.7	+	48.9		2.5	
Violetta	---		---		88.8		48.2		3.0	
VA11B-102	---		89.5		88.5		49.1		3.5	
VA08B-108	94.5	+	90.9	+	87.3		47.8		3.5	
VA12B-8	---		---		87.1		48.8		2.5	
VA11B-134	---		89.1		87.1		48.9		3.5	
VA11B-71	---		88.4		86.1		46.0	-	3.0	
VA10-BYA7-692	---		---		85.7		47.8		3.0	
VA08B-109	87.8		83.4		85.6		47.9		4.5	+
VA11B-126	---		88.2		85.2		51.6	+	2.5	
Secretariat	99.5	+	90.1	+	84.8		48.5		3.8	
VA10-BYA7-782	---		---		84.2		50.1		3.0	
Price	88.4		82.4		84.2		47.8		3.5	
VA11B-141	---		87.1		83.4		50.1		2.5	
VA12B-7	---		91.8	+	83.4		48.3		2.3	
VA11B-15	---		88.1		83.3		48.2		2.0	
VA11B-55	---		88.6		82.9		48.0		3.0	
VA11B-4	---		81.3		82.6		48.5		4.0	
VA11B-41	---		---		81.6		46.9	-	2.0	
VA11B-56	---		81.8		80.4		48.3		4.5	+
VA10-BYA7-781	---		---		79.9		50.0		2.5	
VA10B-9	---		86.3		79.9		50.2		2.5	
VA08B-95	86.9		82.8		79.8		46.7	-	3.3	
Novosadski 183	77.6	-	77.2		79.3		51.6	+	4.0	
VA11B-130	---		87.3		79.0		51.0	+	2.8	
VA10-BYA7-784	---		---		78.2		49.1		1.8	
VA11B-36	---		---		77.9		46.2	-	2.8	
VA11B-140	---		86.9		77.5		52.0	+	2.3	
VA11B-143	---		82.1		77.2		48.5		2.8	
Atlantic	90.1		78.1		76.9		48.2		3.0	
VA10B-11	---		71.5	-	76.8		47.5		5.0	+
VA10B-3	---		81.3		76.3		49.2		3.8	
VA10B-43	---		84.3		76.2		47.8		3.0	
VA09B-35	91.2		83.5		75.3		48.7		3.0	
VA11B-10	---		83.1		75.2		48.3		3.3	
VA11B-8	---		---		74.6		49.0		2.8	
Barsoy	78.2	-	74.2	-	73.6		49.5		3.3	
VA11B-165	---		70.3	-	71.5		49.3		2.8	

Table 13. Summary of performance of barley entries in the Virginia Tech Barley Test, Southern Piedmont AREC, Blackstone, VA, 2014 harvest, cont'd.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Lodging (0-9)	
VA08B-84	82.8		72.1	-	70.4		49.2		3.3	
Wysor	80.6		72.3	-	68.8	-	45.3	-	3.5	
VA11B-63	---		---		68.6	-	48.6		1.3	-
Callao	85.2		78.9		66.9	-	48.4		5.3	+
VA09B-34	82.3		73.2	-	65.5	-	50.5	+	2.3	
VA92-42-46	77.2		70.5	-	62.9	-	47.1		2.5	
Nomini	82.0		63.0	-	61.1	-	46.1	-	2.8	
Average	86.4		82.1		79.0		48.6		3.0	
LSD (0.05)	6.3		7.6		9.8		1.6		1.3	
C.V.	8.8		9.0		8.6		2.3		31.5	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

Table 14. Summary of performance of barley entries in the Virginia Tech Barley Test, planted no-till at the Tidewater AREC, Holland, VA, 2014 harvest.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Lodging (0-9)	
Thoroughbred	95.9	+	91.2	+	95.2	+	47.8		4.3	
VA11B-71	---		91.7	+	92.9	+	48.4		3.3	
VA10-BYA7-782	---		---		87.9		48.0		5.5	
VA11B-8	---		---		86.7		47.7		4.5	
VA12B-8	---		---		84.9		47.1		3.5	
VA08B-84	87.6	+	79.6		84.4		47.9		5.0	
VA10B-3	---		82.1		84.1		46.8		5.0	
VA11B-63	---		---		83.4		48.1		2.3	-
VA10-BYA7-784	---		---		83.1		47.7		4.8	
VA11B-41	---		---		82.9		46.9		3.3	
Price	86.8	+	82.0		82.6		48.1		4.5	
VA09B-35	79.6		78.9		81.8		48.3		4.0	
VA11B-56	---		88.0	+	81.2		46.3		4.0	
VA10-BYA7-781	---		---		81.0		47.6		4.0	
VA11B-15	---		82.2		80.8		47.1		5.3	
VA11B-126	---		79.1		80.5		49.8	+	4.5	
VA12B-7	---		81.1		80.4		48.5		2.0	-
VA11B-130	---		80.8		79.7		51.1	+	4.5	
VA11B-102	---		80.4		79.3		47.1		5.0	
Secretariat	82.0		84.8		79.1		47.3		5.0	
VA11B-143	---		81.9		78.7		48.3		3.0	
VA11B-134	---		81.6		78.6		47.5		5.5	
VA10B-11	---		83.2		78.4		46.7		5.3	
VA11B-55	---		81.5		78.2		46.6		1.8	-
Barsoy	71.7		74.8		77.8		48.5		3.8	
VA10B-43	---		82.0		77.8		46.9		3.5	
Callao	78.5		70.0		77.6		47.2		5.8	+
VA08B-108	81.4		83.3		77.4		46.1		4.5	
VA11B-10	---		75.2		76.8		47.1		5.3	
VA11B-140	---		73.8		75.7		50.0	+	2.3	-
VA10-BYA7-692	---		---		75.0		45.9	-	5.0	
Atlantic	83.9	+	78.7		74.8		47.8		6.0	+
VA11B-165	---		74.8		73.3		47.2		5.5	
VA11B-4	---		81.3		72.4		47.5		3.7	
VA11B-36	---		---		71.9		46.5		4.8	
VA10B-9	---		75.4		71.7		48.7		4.0	

Table 14. Summary of performance of barley entries in the Virginia Tech Barley Test, planted no-till at the Tidewater AREC, Holland, VA, 2014 harvest, cont'd.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Lodging (0-9)	
VA11B-141	---		75.2		71.4		48.6		3.5	
VA08B-95	79.6		69.8	-	69.4		45.4	-	5.8	+
VA09B-34	71.3		72.5		68.8		49.1	+	3.8	
Novosadski 183	65.4	-	72.2		68.3		49.9	+	3.8	
VA92-42-46	56.7	-	67.3	-	67.3		45.5	-	4.5	
VA08B-109	71.5		72.2		66.0		47.1		4.8	
Violetta	---		---		63.0	-	46.4		3.5	
Nomini	56.3	-	56.3	-	56.3	-	46.6		3.8	
Wysor	46.7	-	46.7	-	46.7	-	44.1	-	4.5	
Average	74.7		77.5		77.0		47.5		4.2	
LSD (0.05)	8.8		9.6		12.9		1.6		1.3	
C.V.	10.1		10.9		11.3		2.1		22.1	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

Table 15. Summary of performance of barley entries in the Virginia Tech Barley Test, Eastern Virginia AREC, Warsaw, VA, 2014 harvest.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)	
VA10B-43	---		137.7	+	129.6	+	48.0		116.8	+	35.8		4.3		0.5		1.5	-	0.0		5.5	+
VA12B-7	---		136.4		127.6	+	49.6	+	117.0	+	38.5	+	1.3	-	5.5	+	3.5		0.0		1.8	
Thoroughbred	135.2		133.6		127.2	+	48.8	+	119.5	+	37.8	+	2.8		4.0	+	3.5		1.0	+	2.8	
VA11B-141	---		135.7		126.8	+	49.5	+	115.8	+	38.5	+	2.3		1.0		2.8	-	0.0		2.0	
VA08B-95	136.7		127.9		126.3	+	47.3	-	113.5	-	35.8		5.8	+	1.3		1.8	-	0.0		6.8	+
VA11B-15	---		143.1	+	124.8		47.8		112.8	-	33.0	-	7.0	+	1.0		3.5		0.0		8.0	+
VA11B-130	---		142.9	+	123.7		50.3	+	112.5	-	36.3		1.8	-	0.8		4.0		0.0		1.0	-
VA11B-8	---		---		123.5		48.5		113.3	-	32.3	-	8.3	+	0.8		2.5	-	0.0		8.0	+
VA09B-35	135.4		133.2		123.2		48.9	+	113.3	-	34.8		3.3		0.5		2.0	-	0.0		2.3	
VA08B-108	140.3	+	133.8		122.6		47.2	-	112.5	-	33.3	-	3.3		0.8		4.5		0.0		4.3	
VA10-BYA7-692	---		---		122.5		47.0	-	116.5	+	33.3	-	3.5		0.8		4.5		0.0		3.0	
Secretariat	144.9	+	138.6	+	122.5		48.6		113.3	-	33.0	-	5.5	+	0.3		4.5		0.0		4.5	
VA11B-71	---		135.9		121.8		47.4	-	116.0	+	35.3		3.0		0.3		3.5		0.0		5.8	+
VA11B-36	---		---		121.2		47.2	-	113.8	-	36.0		4.0		0.8		4.5		0.0		3.8	
VA10-BYA7-781	---		---		120.8		49.1	+	111.3	-	36.3		2.5		1.5		2.8	-	0.0		3.5	
VA11B-4	---		139.0	+	120.7		49.4	+	116.3	+	34.0		4.0		0.8		2.5	-	0.0		5.3	+
VA10B-9	---		128.3		120.6		49.8	+	112.0	-	33.3	-	3.3		0.5		2.5	-	0.0		1.8	
Atlantic	136.1		126.0		120.5		47.4	-	112.5	-	33.3	-	4.5		1.5		5.8	+	0.0		3.3	
VA11B-143	---		135.7		120.0		49.2	+	114.5		37.5	+	2.5		1.0		2.3	-	0.0		2.0	
VA11B-10	---		142.3	+	119.9		48.2		117.0	+	34.8		5.5	+	0.8		2.3	-	0.0		7.3	+
VA11B-56	---		129.1		119.7		47.6	-	116.8	+	36.5		2.5		0.8		4.5		0.0		2.3	
VA11B-41	---		---		118.9		47.9		116.5	+	35.8		2.5		1.0		2.8	-	0.0		2.5	
VA11B-63	---		---		118.7		48.1		112.5	-	35.3		1.5	-	0.3		5.5	+	0.0		2.3	
VA11B-102	---		134.1		117.8		46.7	-	117.0	+	36.8		3.5		1.8		2.0	-	0.0		2.0	

Table 15. Summary of performance of barley entries in the Virginia Tech Barley Test, Eastern Virginia AREC, Warsaw, VA, 2014 harvest, cont'd.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Powdery Mildew (0-9)		Early Lodging (0-9)	
VA10B-11	---		136.9		117.4		47.9		115.0		32.8	-	5.0		0.8		1.8	-	0.0		4.8	
VA08B-84	138.7	+	131.0		117.1		48.3		113.5	-	32.5	-	5.8	+	0.3		5.0	+	0.0		4.0	
VA11B-140	---		130.4		116.5		49.3	+	113.3	-	40.0	+	2.0		0.8		3.5		0.0		3.0	
VA12B-8	---		---		115.9		47.6	-	116.0	+	39.0	+	2.8		3.5	+	4.5		0.0		1.0	-
VA09B-34	132.7		131.2		115.8		49.3	+	112.0	-	35.8		1.3	-	0.8		3.0		0.0		1.5	-
VA11B-126	---		126.7		115.5		49.4	+	112.5	-	35.5		2.5		1.3		4.5		0.0		1.3	-
Barsoy	124.7		125.7		115.2		48.0		112.8	-	37.0		4.0		4.3	+	4.8	+	0.0		2.3	
Callao	134.6		127.7		114.6		47.9		111.8	-	28.0	-	7.8	+	1.0		5.8	+	0.0		6.8	+
VA10B-3	---		127.3		114.3		49.0	+	116.5	+	32.0	-	4.5		0.8		5.0	+	0.0		4.5	
VA08B-109	141.7	+	135.5		113.8		47.9		114.3		33.0	-	7.3	+	1.0		2.5	-	0.0		6.8	+
VA10-BYA7-784	---		---		113.4		48.9	+	114.8		37.0		1.3	-	0.5		2.3	-	0.0		0.8	-
VA11B-55	---		124.4		112.8		47.3	-	117.0	+	35.3		0.8	-	1.0		4.8	+	0.0		0.8	-
VA11B-165	---		131.6		112.7		48.1		116.5	+	37.0		3.0		0.8		1.8	-	0.0		1.8	
VA11B-134	---		133.8		111.9		48.8	+	113.5	-	35.0		5.0		1.0		5.0	+	0.0		2.5	
Violetta	---		---		111.6		48.2		122.0	+	35.8		0.5	-	0.0	-	3.3		0.0		0.3	-
Price	120.4	-	109.8	-	109.3		46.6	-	113.8	-	34.3		4.0		1.0		8.0	+	0.0		3.0	
Nomini	123.4	-	117.5	-	108.4	-	45.1	-	112.0	-	41.8	+	2.8		2.0		2.5	-	0.0		2.8	
VA10-BYA7-782	---		---		107.5	-	48.9	+	115.0		37.3		1.0	-	1.0		2.5	-	0.0		1.0	-
Novosadski 183	114.7	-	114.9	-	103.6	-	51.5	+	115.5	+	32.3	-	0.5	-	2.8	+	5.3	+	0.0		0.5	-
Wysor	122.6	-	118.0	-	101.3	-	45.2	-	114.5		41.5	+	2.5		4.5	+	5.3	+	0.0		4.3	
VA92-42-46	113.0	-	104.8	-	96.4	-	45.5	-	114.0		42.3	+	4.0		0.5		7.5	+	0.0		3.8	
Average	130.9		130.3		117.5		48.2		114.6		35.6		3.5		1.3		3.7		0.0		3.3	
LSD (0.05)	6.6		7.3		8.4		0.6		0.8		1.9		1.6		1.2		1.0		0.3		1.8	
C.V.	5.9		5.6		5.0		0.8		0.5		3.8		33.5		66.2		18.5		948.7		38.9	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

Table 16. Summary of performance of barley entries in the Virginia Tech Barley Test, Eastern Shore AREC, Painter, VA, 2014 harvest.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Net Blotch (0-9)		Powdery Mildew (0-9)	
VA12B-8	---		---		100.2	+	51.5		1.0		1.3	
VA11B-10	---		88.5	+	90.3		50.5		0.5	-	0.5	
Thoroughbred	88.1		83.0		89.3		51.5		5.5	+	4.0	+
VA11B-4	---		86.8		88.1		51.8		0.5	-	0.5	
VA11B-71	---		77.5		86.1		51.4		1.0		0.8	
VA11B-102	---		85.1		85.7		50.0		0.5	-	1.0	
VA08B-95	81.1		76.9		85.5		49.1	-	1.5		5.5	+
Atlantic	92.8	+	84.3		84.6		51.5		2.5		0.8	
VA08B-108	86.6		84.2		82.5		49.4		2.5		0.8	
VA11B-141	---		86.2		82.3		51.0		1.3		0.3	
VA10B-43	---		79.3		82.3		50.4		0.8	-	0.5	
VA11B-41	---		---		82.2		51.4		0.5	-	0.8	
VA09B-34	78.3		77.6		81.7		52.1		1.3		0.5	
VA08B-109	84.8		77.4		81.2		50.6		1.3		0.5	
VA11B-143	---		81.9		80.8		52.5	+	2.0		1.3	
VA10B-11	---		82.3		80.5		49.4		2.0		0.8	
VA11B-165	---		78.5		80.3		50.5		1.0		2.8	+
VA11B-130	---		75.9		80.0		53.3	+	2.3		1.0	
VA11B-140	---		76.7		79.4		51.9		2.0		0.8	
Barsoy	74.8		69.5		78.1		50.9		2.8		1.0	
VA11B-56	---		76.0		77.8		49.5		3.8		2.0	
VA11B-63	---		---		77.1		51.2		2.8		1.5	
VA12B-7	---		84.3		76.8		51.6		3.5		1.5	
Secretariat	83.4		79.6		76.3		50.3		2.8		0.5	
VA08B-84	79.8		78.3		76.0		50.9		2.0		0.5	
VA11B-55	---		74.6		75.8		50.7		3.5		1.3	
VA10-BYA7-692	---		---		75.7		51.1		4.5	+	1.5	
VA11B-8	---		---		75.7		52.0		2.0		0.5	
VA10B-3	---		75.8		74.4		52.3	+	0.5	-	0.8	
VA11B-126	---		77.5		74.1		51.8		2.5		0.8	
VA10-BYA7-781	---		---		73.9		50.0		4.8	+	2.0	
VA10B-9	---		68.2		72.7		51.5		1.5		0.8	
VA11B-134	---		82.3		72.3		50.9		3.5		1.0	
VA11B-15	---		80.2		71.8		48.9	-	3.5		1.8	
Price	83.5		74.1		71.1		50.3	-	3.3		0.5	
VA11B-36	---		---		71.0		50.5		1.5		0.3	
VA10-BYA7-784	---		---		70.1		50.7		3.0		1.3	
VA09B-35	80.7		71.1		67.8		51.4		1.5		0.8	

Table 16. Summary of performance of barley entries in the Virginia Tech Barley Test, Eastern Shore AREC, Painter, VA, 2014 harvest, cont'd.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Net Blotch (0-9)		Powdery Mildew (0-9)	
VA10-BYA7-782	---		---		67.1		51.5		4.0	+	1.8	
Novosadski 183	70.0	-	68.9		67.0		52.6	+	4.3	+	2.3	+
Callao	81.6		67.5		64.1		51.2		2.8		0.3	
Violetta	---		---		58.2	-	51.8		1.5		1.0	
Nomini	69.0	-	59.9	-	49.1	-	46.5	-	0.0	-	0.8	
VA92-42-46 *	62.8	-	36.5	-	*	-	47.2	-	4.8	+	0.3	
Wysor *	82.3		68.6		*	-	44.8	-	3.5		0.0	-
Average	81.0		77.9		77.1		50.9		2.2		1.2	
LSD (0.05)	9.3		10.5		13.9		1.5		1.5		0.9	
C.V.	12.9		12.0		12.2		1.9		45.6		59.1	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

* 2014 plots were damaged by deer feeding

Table 17. Summary of performance of barley entries in the Virginia Tech Barley Test, Northern Piedmont Center, Orange, VA, 2014 harvest.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Height (In)		Lodging (0-9)	
VA11B-126	---		105.5	+	126.5	+	50.4		39.3	+	0.0	
VA12B-8	---		---		125.0	+	49.5		37.8		0.0	
VA11B-141	---		103.0		113.6		51.0		40.8	+	0.0	
VA10-BYA7-692	---		---		112.4		48.6		35.3		0.0	
VA10B-43	---		105.5	+	111.8		49.2		35.8		0.0	
VA11B-102	---		100.4		111.6		50.0		41.3	+	0.8	
VA12B-7	---		92.9		110.6		51.1		37.3		0.0	
VA09B-34	98.7		93.5		108.3		52.4	+	38.8		0.0	
VA11B-41	---		---		108.1		47.4		35.3		0.0	
VA11B-4	---		98.6		107.0		51.7		35.5		0.0	
VA08B-108	104.1		100.1		105.9		48.5		33.8		0.0	
VA11B-8	---		---		105.1		50.6		34.3		0.0	
VA11B-63	---		---		103.3		51.1		32.5		0.0	
VA11B-143	---		97.7		102.3		51.7		38.3		0.0	
VA10-BYA7-784	---		---		100.6		48.8		36.5		0.0	
VA10-BYA7-781	---		---		100.5		50.9		35.3		0.0	
Atlantic	101.0		91.1		100.3		49.6		32.8		0.0	
Nomini	99.4		83.7		100.1		47.1		38.3		0.0	
VA11B-130	---		90.1		99.2		51.7		38.8		0.0	
VA10-BYA7-782	---		---		98.9		50.3		36.3		0.0	
Price	93.1		87.3		98.2		49.7		32.3		0.0	
Callao	98.9		90.6		97.7		49.2		32.3		1.8	+
VA11B-10	---		80.0		97.0		49.0		34.3		0.0	
VA11B-56	---		97.8		96.9		48.1		35.0		0.0	
VA11B-15	---		85.6		95.9		49.0		35.3		0.0	
Thoroughbred	107.1		99.5		95.4		50.7		36.5		1.3	
VA11B-165	---		89.4		95.2		49.9		37.3		0.0	
VA10B-11	---		84.5		94.4		48.7		33.0		0.0	
VA11B-71	---		83.4		93.5		49.6		31.0	-	0.0	
VA09B-35	101.6		89.0		93.1		50.9		35.3		0.0	
VA10B-9	---		86.3		93.0		51.9		34.8		0.0	
VA11B-134	---		84.7		92.4		51.2		38.3		0.0	
Secretariat	98.4		87.3		91.3		48.5		32.5		0.0	
VA08B-109	96.9		81.1		91.1		49.2		34.8		0.0	
VA11B-55	---		91.7		91.1		43.4	-	33.8		0.0	
VA11B-140	---		90.6		89.8		50.7		42.8	+	0.0	
Wysor	85.0		89.5		89.5		45.2	-	39.3	+	1.3	
Novosadski 183	81.8	-	79.1		87.3		48.6		32.8		0.0	

Table 17. Summary of performance of barley entries in the Virginia Tech Barley Test, Northern Piedmont Center, Orange, VA, 2014 harvest, cont'd.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Height (In)		Lodging (0-9)	
VA10B-3	---		88.9		86.8		49.7		29.3	-	0.0	
VA08B-84	95.4		79.8		85.5		49.7		32.5		0.0	
VA08B-95	84.2		75.3		85.3		47.0		34.5		2.3	+
VA11B-36	---		---		84.2		49.2		34.5		0.0	
Barsoy	84.8		74.8		82.8		49.9		37.8		0.0	
Violetta	---		---		79.8		47.4		32.3		0.0	
VA92-42-46	96.6		59.8	-	59.8	-	43.1	-	40.5	+	0.0	
Average	95.4		89.1		97.7		49.3		35.7		0.2	
LSD (0.05)	13.3		15.5		23.9		2.9		3.4		1.3	
C.V.	15.2		14.5		15.4		3.6		6.9		587.7	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

Table 18. Summary of performance of barley entries in the Virginia Tech Barley Test, Kentland Farm, Blacksburg,VA, 2014 harvest.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Winter Survival (%)	
VA10B-43	---		144.7	+	145.1		49.7		123.3	+	32.0		5.3		1.8	-	0.5		85.0	
VA11B-4	---		134.9		143.7		50.6		122.8	+	30.8		4.8		5.3	+	1.3		83.0	-
VA11B-141	---		142.0	+	142.9		50.5		122.5	+	32.5	+	3.8		1.3	-	1.3		88.3	
VA11B-10	---		134.9		142.8		49.5		122.5	+	30.5		6.5	+	2.0		1.0		87.0	
VA11B-41	---		---		142.0		49.9		122.3	+	32.0		4.3		1.3	-	0.8		86.0	
VA11B-55	---		142.9	+	141.7		49.3		123.3	+	30.8		3.0	-	5.8	+	2.0		91.0	
VA11B-165	---		139.8	+	141.6		50.0		121.8	+	32.5	+	3.8		1.8	-	1.8		89.5	
VA11B-63	---		---		141.2		50.3		118.0	-	29.8		4.0		1.3	-	1.8		87.3	
VA10-BYA7-782	---		---		140.2		49.1		122.3	+	31.3		4.0		1.3	-	0.5		94.3	
VA11B-143	---		140.5	+	140.1		51.4	+	121.3		31.3		4.5		1.3	-	1.0		87.5	
Secretariat	146.4	+	136.3		139.9		50.5		118.3	-	29.0	-	4.5		1.0	-	1.5		85.8	
VA11B-56	---		141.2	+	139.7		49.7		122.8	+	31.8		4.3		4.3		1.8		93.8	
VA11B-102	---		133.2		138.9		49.5		122.5	+	31.8		6.8	+	2.8		1.0		95.0	+
VA11B-8	---		---		138.8		50.5		119.3	-	30.3		2.8	-	1.3	-	1.0		90.3	
VA11B-134	---		136.6		138.7		49.5		121.3		30.8		7.0	+	1.0	-	1.8		87.8	
VA11B-36	---		---		138.1		48.5	-	121.3		32.8	+	5.0		1.5	-	1.8		86.8	
VA10B-11	---		134.7		138.0		49.9		119.8	-	30.8		4.8		1.8	-	0.5		90.8	
VA11B-130	---		135.8		137.9		51.2	+	118.8	-	31.5		3.5		1.3	-	1.8		93.0	
VA10B-3	---		131.8		135.8		50.1		123.3	+	28.3	-	5.5		1.5	-	0.5		86.0	
VA12B-8	---		---		135.1		49.6		122.8	+	32.8	+	3.8		7.8	+	1.8		91.5	
VA11B-71	---		139.4	+	135.0		49.5		119.3	-	29.8		4.8		1.3	-	1.0		87.0	
VA10-BYA7-784	---		---		134.6		49.7		122.5	+	31.8		4.8		1.5	-	1.0		95.5	+
VA08B-84	142.5	+	132.2		134.5		50.7	+	118.0	-	28.8	-	4.3		1.0	-	1.3		88.8	
VA11B-126	---		134.1		134.2		49.5		118.8	-	30.5		4.5		2.0		1.8		95.5	+
VA11B-140	---		135.2		133.1		51.2	+	120.8		33.5	+	2.3	-	1.5	-	0.3	-	83.5	-
Thoroughbred	126.6		126.1		131.5		48.8	-	124.0	+	30.8		4.5		8.5	+	1.0		91.5	
VA10B-9	---		130.4		131.4		51.2	+	118.5	-	28.3	-	2.3	-	2.3		1.5		87.0	

Table 18. Summary of performance of barley entries in the Virginia Tech Barley Test, Kentland Farm, Blacksburg,VA, 2014 harvest, cont'd.

Barley Lines	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a @ 48 lb/bu)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Net Blotch (0-9)		Winter Survival (%)	
VA08B-108	140.8	+	130.8		130.4		49.6		118.3	-	28.8	-	5.5		4.0		2.3		87.8	
VA10-BYA7-781	---		---		130.2		50.1		119.3	-	31.0		3.5		2.8		1.0		95.0	+
Price	132.9	+	132.1		129.1		49.7		120.0		30.3		5.5		7.3	+	1.8		87.3	
VA11B-15	---		120.2		129.1		49.3		118.0	-	29.5		4.5		2.5		1.8		87.3	
VA12B-7	---		128.7		128.3		49.7		123.3	+	30.8		3.3		8.8	+	1.3		90.8	
VA10-BYA7-692	---		---		127.8		48.5	-	123.5	+	27.5	-	5.0		1.3	-	0.5		92.5	
Violetta	---		---		126.9		51.3	+	124.0	+	27.8	-	2.3	-	0.3	-	0.3	-	94.0	
VA08B-109	133.6	+	127.3		126.5		49.9		119.0	-	29.5		5.0		2.0		1.3		83.8	-
VA08B-95	124.9		124.3		124.3		49.3		118.5	-	30.5		5.5		1.8	-	1.8		87.0	
VA09B-34	133.0	+	130.0		123.9		51.0	+	118.5	-	30.3		3.5		1.5	-	1.3		93.5	
VA09B-35	132.5	+	132.1		121.4		50.3		118.8	-	30.5		5.3		4.3		0.5		88.8	
Barsoy	102.6	-	112.3	-	121.3		48.8	-	119.3	-	31.5		6.8	+	8.8	+	2.0		87.3	
Atlantic	126.0		118.6	-	117.3	-	49.3		117.0	-	30.0		6.0	+	6.5	+	2.3		86.5	
Callao	106.9	-	103.5	-	114.6	-	49.7		117.0	-	28.5	-	7.5	+	5.0	+	2.3		89.5	
Novosadski 183	94.9	-	105.3	-	110.7	-	52.9	+	122.5	+	29.5		1.8	-	6.8	+	5.8	+	92.3	
VA92-42-46	108.9	-	104.7	-	106.0	-	47.3	-	121.0		35.8	+	3.3		0.5	-	4.8	+	86.8	
Nomini	110.9	-	97.6	-	104.0	-	46.4	-	118.8	-	35.8	+	4.0		7.0	+	0.3	-	92.0	
Wysor*	103.3	-	99.8	-	*		*		120.8		35.5	+	5.3		9.0	+	2.3		95.8	+
Average	124.2		129.2		132.0		49.8		120.6		30.8		4.5		3.1		1.4		89.3	
LSD (0.05)	9.5		9.7		14.5		0.8		0.8		1.5		1.3		1.2		1.0		5.4	
C.V.	8.9		7.1		7.5		1.1		0.5		3.5		20.2		27.6		50.1		4.3	

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 or lodging where 0 = highly resistant and 9 = highly susceptible.

* 2014 plots were damaged by deer feeding.

Section 2: Barley Scab Research

One of the primary research objectives of the Virginia Tech barley breeding program is to identify and develop cultivars possessing resistance to Fusarium head blight (FHB) or scab. Each year all barley and hulless barley entries in Virginia's Official State Variety Trials are evaluated for FHB resistance in an inoculated, irrigated nursery at a Mount Holly test site. Data from this test for the current crop year and two and three year averages for FHB incidence, FHB severity, FHB Index (incidence x severity / 100), and deoxynivalenol (DON) content from 2012 and 2013 are included in this bulletin (Tables 19-24) to aid producers in selection of cultivars on the basis of FHB resistance. Cultivars possessing complete resistance or immunity to FHB have not been identified and resistance levels in currently available cultivars vary from moderately resistant to highly susceptible.

A major goal of the breeding program is to identify and incorporate unique and complementary types of FHB resistance into cultivars to enhance the overall level of resistance. Incorporating multiple resistance genes having additive effects on FHB resistance into cultivars will enhance the overall level of resistance. Because the individual resistance genes are located on different barley chromosomes and each gene confers only partial resistance to FHB, identifying lines having multiple resistance genes is difficult using traditional breeding techniques. To overcome this limitation, our program will incorporate the available markers to help select FHB resistant cultivars.

Entries were inoculated by spreading scabby corn seeds in plots at the booting stage. A moderate level of FHB infection was obtained in 2014. Among 27 hulless lines and varieties tested in 2014, the FHB index ranged from 1.3 to 23.1 with FHB incidence ranging from 25% to 92.5% and FHB severity from 5% to 25% (Table 19). Four two-rows hulless lines (VA12HFHB-89(2R), VA12HFHB-90(2R), VA10H-79WS(2R), and VA12HFHB-93(2R)) showed FHB index lower than resistant variety 'Eve'. However, VA10H-79WS(2R) had DON content of 25.1 ppm higher than Eve (6.8 ppm) and Dan (8.6 ppm) in 2013. Fifteen lines and two varieties had FHB index values lower that than the test mean (6.7). Based on two year mean data for 2013 and 2014 (Table 20), twelve lines and two varieties had FHB index values lower than the test mean (<12.2). Because of a high level of FHB infection in 2013, average DON content was high (29.2 ppm). Eve had the least DON content (6.8 ppm) followed by Dan (8.6 ppm) and VA09H-110(2R) (11.9 ppm). Three hulless barley lines (VA09H-112, VA09H-110, and VA08H-5BS) and one variety (Eve) tested across three years (2012-2014) had average FHB index values lower than the test mean of 13.8 and DON content lesser than susceptible variety 'Doyce' (Table 21).

A moderate FHB infection level was obtained for hulled barley in 2014. Among 45 barley lines and varieties tested in 2014, the FHB index varied from 1 to 10 with FHB incidence ranging from 30% to 92.5% and FHB severity ranging from 2% to 12.5% (Table 22). 'Nomini' and VA09B-24 were the most FHB resistant lines in 2014. Nineteen lines and nine varieties had FHB index values lower than the mean (<4.3). Based on two year mean data for 2013 and 2014 (Table 23), eleven lines and five varieties had FHB index values lower than the test mean (<12.8) and DON content values lower than the test mean (28.0 ppm) in 2013. Two hulled barley lines (VA92-42-46 and VA08B-95) and three varieties (Nomini, Novosadski 183, and Barsoy) tested across three years (2012-2014) had average FHB index values lower than the test mean of 7.6 and DON content values lower than the test mean of 21.6 ppm (Table 24).

Table 19. Summary of reaction of entries in the Virginia Tech State Hulless Barley Test to Fusarium head blight (scab), 2014 harvest.

LINE	FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	Date Headed (Julian)	
VA12HFHB-89(2R)	25.0	-	5.0		1.3		1	115.0	
VA12HFHB-90(2R)	30.0	-	5.0		1.5		2	116.0	
VA10H-79WS(2R)	32.5	-	5.0		1.6		3	118.0	+
VA12HFHB-93(2R)	40.0	-	5.0		2.0		4	115.5	
Eve	42.5	-	5.0		2.1		5	111.0	-
VA08H-79WS	50.0	-	5.0		2.5		6	119.0	+
VA09H-112(2R)	57.5		5.0		2.9		7	117.0	
VA08H-5BS	60.0		5.0		3.0		8	121.0	+
Dan	62.5		5.0		3.1		9	116.0	
VA11H-63	72.5		5.0		3.6		10	114.5	
VA06H-25	60.0		6.0		3.7		11	117.5	
VA07H-35WS	77.5		5.0		3.9		12	119.5	+
VA11H-89WS	67.5		6.0		4.0		13	112.5	-
VA11H-97WS	82.5	+	5.0		4.1		14	113.0	-
VA09H-110(2R)	65.0		7.5		4.9		15	116.0	
VA11H-94WS	75.0		7.5		5.8		16	113.0	-
VA10H-34	67.5		10.0		6.6		17	115.0	
VA08H-65	80.0		8.5		6.8		18	114.0	
VA07H-31WS	70.0		12.5		8.8		19	117.0	
VA10H-29	75.0		12.5		9.8		20	113.0	-
VA10H-64	82.5	+	12.5		10.1		21	113.5	-
VA12H-34	85.0	+	12.5		10.5		22	121.0	+
VA10H-49	75.0		15.0		11.3		23	112.5	-
VA06H-79	80.0		15.0		12.0		24	116.5	
VA11H-34	87.5	+	17.5		15.4	+	25	119.5	+
VA10H-57	85.0	+	20.0	+	17.0	+	26	116.0	
Doyce	92.5	+	25.0	+	23.1	+	27	113.5	-
Average	65.9		9.2		6.7			115.8	
LSD (0.05)	15.6		8.7		7.0			2.0	
C.V.	11.5		46.3		50.5			0.8	

Released cultivars are shown in bold print. Varieties are ordered by ascending index averages.
A plus or minus sign indicates a performance significantly above or below the average.
Entries were planted in 6-row plots, 13 ft in length cut back to 9 ft at Mt. Holly, VA and were inoculated at 50% and 100% heading stages with Fusarium graminearum spore suspension (50,000 spores/ml).
[1]Scab Incidence (%): Percentage of infected spikes among 10 randomly selected spikes.
[2]Scab Severity (%): Percentage of infected spikelets among 10 infected spikes.
[3]Scab Index = Incidence X Severity/100 (overall indicator of scab resistance/susceptibility level.)
WS indicates white seed and (2R) indicates a 2-row type.

Table 20. Two year average summary of reaction of entries in the Virginia Tech State Hulless Barley Tests to Fusarium head blight (scab), 2013 and 2014 harvests.

LINE	FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	Date Headed (Julian)		DON[4] (ppm)	
Eve	37.5	-	3.5	-	1.4	-	1	107.3	-	6.8	
VA11H-89WS	68.8		4.0	-	2.7	-	2	108.3	-	14.5	
VA11H-97WS	78.8		5.0		3.9		3	109.5	-	19.0	
VA09H-112(2R)	61.3	-	7.5		4.7		4	112.5	+	14.1	
VA08H-65	72.5		7.3		5.5		5	109.8	-	22.2	
VA10H-29	75.0		7.3		5.6		6	108.8	-	30.1	+
VA09H-110(2R)	67.5		8.8		5.9		7	112.0		11.9	
VA10H-64	76.3		10.0		7.8		8	108.8	-	38.8	+
VA08H-5BS	72.5		10.0		8.3		9	114.3	+	24.0	
Dan	76.3		10.0		8.3		10	111.8		8.6	
VA10H-34	78.8		11.3		9.1		11	110.3		31.4	+
VA10H-79WS(2R)	63.8		12.5		10.3		12	113.3	+	25.1	
VA11H-63	78.8		13.8		11.3		13	110.8		14.6	
VA08H-79WS	75.0		13.8		12.5		14	114.0	+	27.8	
VA10H-57	90.0	+	18.8		16.9		15	111.5		34.4	+
VA06H-25	80.0		24.3	+	23.1	+	16	113.0	+	71.4	+
VA07H-35WS	88.8	+	23.8		23.2	+	17	113.8	+	66.0	+
Doyce	91.3	+	27.5	+	25.1	+	18	109.0	-	33.0	+
VA07H-31WS	85.0		30.0	+	28.1	+	19	112.5	+	36.2	+
VA06H-79	90.0	+	32.5	+	31.0	+	20	112.8	+	54.2	+
Average	75.4		14.1		12.2			111.2		29.2	
LSD (0.05)	12.8		9.5		9.3			1.1			
C.V.	11.8		47.1		53.2			0.7			

Released cultivars are shown in bold print. Varieties are ordered by ascending index averages.
A plus or minus sign indicates a performance significantly above or below the average.
Entries were planted in 6-row plots, 13 ft in length cut back to 9 ft at Mt. Holly, VA and were inoculated at booting stage with Fusarium graminearum corn spawn.

[1]Scab Incidence (%): Percentage of infected spikes among 10 randomly selected spikes.

[2]Scab Severity (%): Percentage of infected spikelets among 10 infected spikes.

[3]Scab Index = Incidence X Severity/100 (overall indicator of scab resistance/susceptibility level.)

[4]DON values were measured (pooled over replications) from the 2013 harvest year.

WS indicates white seed and (2R) indicates a 2-row type.

Table 21. Three year average summary of reaction of entries in the Virginia Tech State Hulless Barley Tests to Fusarium head blight (scab), 2012 - 2014 harvests.

LINE	Powdery Mildew (0-9)		Leaf Rust (0-9)		FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	Date Headed (Julian)		DON[4] (ppm)	
Eve	0.0		1.5		36.7	-	10.7		3.8		1	99.8	-	6.2	
VA09H-112(2R)	0.0		0.0		57.5	-	8.3		4.8		2	105.3		10.2	
VA09H-110(2R)	0.0		1.5		60.0		9.3		5.3		3	106.3	+	8.8	
VA08H-5BS	4.0	+	2.0		60.0		10.8		6.8		4	107.8	+	7.0	
VA10H-64	0.0		2.5		60.8		20.0		9.2		5	101.3	-	26.8	+
VA08H-79WS	8.5	+	0.0		76.7		12.5		11.0		6	109.7	+	37.2	+
VA08H-65	0.0		0.5		66.7		19.8		11.6		7	103.0	-	21.2	
Dan	0.0		0.5		74.2		18.3		15.4		8	106.2		7.7	
VA06H-25	4.0	+	1.5		70.0		22.8		18.7		9	107.3	+	38.0	+
Doyce	0.0		2.0		75.8		25.8		20.7		10	101.8	-	17.9	
VA07H-31WS	2.5		2.0		76.7		25.0		21.8		11	106.7	+	21.6	
VA07H-35WS	4.0	+	0.0		85.8	+	24.2		22.1		12	107.7	+	43.1	+
VA06H-79	0.5		5.0		80.0		34.2	+	28.2	+	13	107.3	+	27.8	+
Average	1.8		1.5		67.8		18.6		13.8			105.4		23.1	
LSD (0.05)	2.2		4.1		15.9		11.1		10.1			0.9		13.1	
C.V.					20.0		50.9		62.5			0.7		31.8	

Released cultivars are shown in bold print. Varieties are ordered by ascending index averages.
A plus or minus sign indicates a performance significantly above or below the average.
Entries were planted in 6-row plots, 13 ft in length cut back to 9 ft at Mt. Holly, VA and were inoculated at booting stage with Fusarium graminearum corn spawn.

[1]Scab Incidence (%): Percentage of infected spikes among 10 randomly selected spikes.

[2]Scab Severity (%): Percentage of infected spikelets among 10 infected spikes.

[3]Scab Index = Incidence X Severity/100 (overall indicator of scab resistance/susceptibility level.)

[4]DON values were measured from the 2012 and 2013 harvest year.

WS indicates white seed and (2R) indicates a 2-row type.

Table 22. Summary of reaction of entries in the Virginia Tech State Barley Test to Fusarium head blight (scab), 2014 harvest.

LINE	FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	Date Headed (Julian)	
Nomini	57.5	-	2.0		1.0	-	1	112.0	
VA09B-34	57.5	-	2.0		1.0	-	2	112.5	
Novosadski 183	30.0	-	5.0		1.5		3	113.0	
VA11B-143	65.0		3.5		2.0		4	114.5	
Thoroughbred	75.0		2.5		2.0		5	117.5	+
Violetta	52.5	-	3.5		2.0		6	120.5	+
VA11B-140	70.0		3.5		2.5		7	112.5	
VA11B-102	60.0		3.5		2.5		8	115.5	
Callao	80.0		3.5		3.0		9	111.0	-
VA10-BYA7-781	67.5		5.0		3.5		10	110.0	-
Barsoy	72.5		5.0		3.5		11	110.5	-
VA10B-9	70.0		5.0		3.5		12	112.5	
VA92-42-46	65.0		5.0		3.5		13	115.0	
VA11B-141	82.5		4.5		3.5		14	117.0	+
VA11B-126	75.0		5.0		4.0		15	110.0	-
VA11B-134	72.5		5.5		4.0		16	110.5	-
VA11B-130	70.0		5.0		4.0		17	111.5	-
VA11B-63	77.5		5.0		4.0		18	112.0	
Secretariat	70.0		5.0		4.0		19	113.0	
Atlantic	75.0		5.0		4.0		20	113.0	
VA09B-35	82.5		5.0		4.0		21	113.0	
VA08B-108	77.5		5.0		4.0		22	113.5	
VA11B-36	85.0		5.0		4.0		23	113.5	
VA11B-15	85.0		5.0		4.0		24	114.0	
VA12B-8	70.0		5.0		4.0		25	115.0	
VA11B-41	75.0		5.0		4.0		26	115.5	
Wysor	80.0		5.0		4.0		27	115.5	
VA10-BYA7-784	67.5		6.0		4.0		28	115.5	
VA12B-7	87.5		5.0		4.5		29	116.0	
VA11B-165	80.0		6.0		4.5		30	116.0	
Price	75.0		6.0		5.0		31	114.5	
VA10B-43	85.0		6.0		5.0		32	116.5	
VA10B-3	85.0		6.0		5.0		33	117.0	+
VA08B-95	90.0		6.0		5.5		34	113.0	
VA10-BYA7-782	75.0		7.0		5.5		35	114.5	
VA11B-55	85.0		6.5		5.5		36	115.5	
VA10B-11	90.0		6.0		5.5		37	116.0	
VA11B-10	90.0		6.0		5.5		38	116.0	
VA08B-84	92.5		6.0		6.0		39	114.0	
VA08B-109	92.5		6.0		6.0		40	114.5	
VA11B-4	90.0		6.5		6.0		41	117.5	+

Table 22. Summary of reaction of entries in the Virginia Tech State Barley Test to Fusarium head blight (scab), 2014 harvest, cont'd.

LINE	FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	Date Headed (Julian)	
VA11B-56	90.0		7.5		7.0		42	115.0	
VA11B-8	82.5		8.5		7.5	+	43	115.5	
VA11B-71	87.5		10.5	+	9.0	+	44	118.0	+
VA10-BYA7-692	80.0		12.5	+	10.0	+	45	116.0	
Average	76.1		5.4		4.3			114.3	
LSD (0.05)	17.5		3.7		3.1			2.7	
C.V.	11.4		34.1		35.2			1.2	

Released cultivars are shown in bold print. Varieties are ordered by ascending index averages.
A plus or minus sign indicates a performance significantly above or below the average.
Entries were planted in 6-row plots, 13 ft in length cut back to 9 ft at Mt. Holly, VA and were inoculated at 50% and 100% heading stages with Fusarium graminearum spore suspension (50,000 spores/ml).
[1]Scab Incidence (%): Percentage of infected spikes among 10 randomly selected spikes.
[2]Scab Severity (%): Percentage of infected spikelets among 10 infected spikes.
[3]Scab Index = Incidence X Severity/100 (overall indicator of scab resistance/susceptibility level.)

Table 23. Two year average summary of reaction of entries in the Virginia Tech State Barley Tests to Fusarium head blight (scab), 2013 and 2014 harvests.

LINE	FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	Date Headed (Julian)		DON[4] (ppm)	
Nomini	61.3	-	3.5	-	2.2	-	1	108.5	-	13.0	
VA09B-35	83.8		5.0		4.2		2	108.8		32.9	+
Wysor	77.5		5.5		4.4		3	110.8		20.3	
VA92-42-46	70.0	-	6.3		4.5		4	110.5		14.3	
VA09B-34	68.8	-	6.0		4.6		5	108.3	-	32.6	+
VA11B-126	77.5		6.3		5.0		6	107.0	-	8.2	
VA11B-134	77.5		6.5		5.2		7	107.3	-	15.2	
Novosadski 183	62.5	-	7.5		5.5		8	110.3		17.6	
VA08B-95	80.0		6.8		5.6		9	108.8		14.4	
VA10B-9	77.5		7.5		6.0		10	108.3	-	26.8	
VA08B-109	88.8		6.8		6.0		11	110.3		26.8	
Barsoy	76.3		7.5		6.1		12	107.3	-	19.7	
VA11B-140	75.0		8.0		6.3		13	108.5	-	10.5	
VA11B-130	82.5		7.5		6.6		14	107.8	-	8.8	
Callao	87.5		9.3		8.7		15	108.0	-	24.4	
VA11B-143	80.0		11.8		10.9		16	109.8		15.4	
VA12B-7	93.8		11.3		10.9		17	111.5		25.0	
VA08B-108	86.3		12.5		11.8		18	109.0		22.2	
Thoroughbred	87.5		12.5		12.2		19	112.5	+	34.4	+
VA11B-165	90.0		13.0		12.4		20	111.3		28.3	+
VA11B-15	92.5		13.8		13.4		21	109.3		20.3	
Price	87.5		14.3		13.5		22	110.0		34.6	+
Secretariat	82.5		15.0		14.0		23	109.5		30.1	+
Atlantic	85.0		15.0		14.3		24	108.8		28.6	+
VA11B-71	93.8		15.3		14.4		25	112.8	+	54.0	+
VA10B-11	92.5		15.5		15.0		26	111.3		27.4	
VA11B-102	80.0		16.8		16.1		27	112.0	+	39.6	+
VA11B-141	91.3		17.3		16.8		28	112.3	+	13.2	
VA11B-4	95.0		19.5		19.2		29	112.0	+	40.4	+
VA10B-3	92.5		21.8		21.3		30	112.8	+	52.8	+
VA11B-10	95.0		21.8		21.5		31	112.0	+	39.4	+
VA08B-84	96.3	+	26.8	+	26.5	+	32	109.8		27.7	

Table 23. Two year average summary of reaction of entries in the Virginia Tech State Barley Tests to Fusarium head blight (scab), 2013 and 2014 harvests, cont'd.

LINE	FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	Date Headed (Julian)		DON[4] (ppm)	
VA11B-55	92.5		32.0	+	31.6	+	33	112.3	+	58.4	+
VA11B-56	95.0		35.0	+	34.6	+	34	111.8	+	53.0	+
VA10B-43	92.5		38.0	+	37.6	+	35	112.5	+	51.0	+
Average	84.2		13.7		12.8			110.1		28.0	
LSD (0.05)	11.7		9.9		10.1			1.5			
C.V.	9.9		51.4		55.6			0.9			

Released cultivars are shown in bold print. Varieties are ordered by ascending index averages.
A plus or minus sign indicates a performance significantly above or below the average.
Entries were planted in 6-row plots, 9 ft in length at Mt. Holly, VA. They were inoculated at 50% and 100% heading stages with Fusarium graminearum spore suspension (50,000 spores/ml).

[1]Scab Incidence (%): Percentage of infected spikes among 10 randomly selected spikes.

[2]Scab Severity (%): Percentage of infected spikelets among 10 infected spikes.

[3]Scab Index = Incidence X Severity/100 (overall indicator of scab resistance/susceptibility level.)

[4]DON values were measured (pooled over replications) from the 2013 harvest year.

Table 24. Three year average summary of reaction of entries in the Virginia Tech State Barley Tests to Fusarium head blight (scab), 2012 - 2014 harvests.

LINE	Powdery Mildew (0-9)		Leaf Rust (0-9)		FHB Incidence [1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	Date Headed (Julian)		DON[4] (ppm)	
Nomini	0.0		2.5	+	44.2	-	3.8		1.6		1	101.3	-	8.0	
VA92-42-46	0.0		0.0	-	50.0		6.3		3.2		2	103.5		10.4	
Wysor	0.0		3.0	+	56.7		8.3		3.8		3	104.2	+	25.4	+
VA09B-34	1.0		0.0	-	54.2		9.0		4.1		4	101.8		31.4	+
Novosadski 183	0.0		0.0	-	56.7		7.0		4.6		5	103.8		17.0	
Barsoy	0.0		2.5	+	55.8		8.8		4.8		6	100.3	-	10.6	
VA08B-95	8.0	+	0.0	-	68.3		7.5		5.8		7	102.8		20.0	
VA09B-35	1.0		0.0	-	64.2		12.2		6.2		8	102.3		24.3	+
VA08B-109	0.0		1.0		75.8		11.2		7.2		9	104.0		31.1	+
Callao	0.0		0.0	-	68.3		10.5		7.6		10	101.0	-	14.6	
VA08B-108	0.0		0.0	-	69.2		11.7		9.0		11	102.8		25.4	+
Thoroughbred	7.5	+	0.0	-	70.0		14.2		10.0		12	106.7	+	32.5	+
Price	0.0		0.0	-	68.3		14.5		10.5		13	103.5		29.5	+
Secretariat	0.5		0.0	-	65.8		14.2		10.9		14	103.5		22.1	+
Atlantic	0.5		1.0		68.3		17.5		13.2		15	102.7		29.5	+
VA08B-84	0.0		0.5		74.2		24.5	+	19.7	+	16	103.0		16.8	
Average	1.2	#	0.7		63.1		11.3		7.6			103.0		21.6	
LSD (0.05)	1.3		0.6		14.6		9.6		7.3			1.2		12.1	
C.V.					19.9		72.7		82.6			1.0		32.4	

Released cultivars are shown in bold print. Varieties are ordered by ascending index averages.
A plus or minus sign indicates a performance significantly above or below the average.
Entries were planted in 6-row plots, 9 ft in length at Mt. Holly, VA. They were inoculated at 50% and 100% heading stages with Fusarium graminearum spore suspension (50,000 spores/ml).

[1]Scab Incidence (%): Percentage of infected spikes among 10 randomly selected spikes.

[2]Scab Severity (%): Percentage of infected spikelets among 10 infected spikes.

[3]Scab Index = Incidence X Severity/100 (overall indicator of scab resistance/susceptibility level.)

[4]DON values were measured from the 2012 and 2013 harvest year.

Section 3: Malt Barley Management Research

Barley and other minor cereal crops have been struggling to survive on the east coast due to low prices and lack of market. Increased interest in growing malt-type barley for use in the craft and specialty brewing industry has illuminated our desire to develop malt-type barley varieties adapted to the mid-Atlantic and southeastern United States regions. As a result, we are currently involved in a cooperative national winter malt barley research trial that includes 10 states.

Our program is focusing on developing barley having superior malt quality for potential use in the brewing industry. In this regard, the Virginia Tech breeding program has evaluated several winter malting barley lines over the past several years, primarily for use as parents in our breeding program. One of the two parents of our hulled barley variety Thoroughbred is 'Plaisant,' a French malting variety, imparting Thoroughbred with fairly good malt extract but lacking desired enzymes for large scale beer production.

One constraint in most currently available cultivars developed elsewhere is that they do not have the desired high level of genetic disease resistance. Our typical variety tests do not employ fungicides, however in this case we wanted to assess the relative performance of these malt type barley cultivars under a management regime that would be recommended to commercial growers.

Three experiments were conducted in 2013-14 to measure the effect of cultivar disease resistance and fungicide application in current and promising malt-type barley lines and standard cultivar comparisons. Lines designated with a VA- are experimental cultivars developed in the Virginia Tech program. Listing and usage of the fungicides in this test does not imply endorsement of these products over others. They were chosen because these products are in common use by producers in the region.

Malt Barley Management Production Practices 2013-14

Painter - Planted October 24, 2013. Preplant fertilizer was 30 lb N on October 23, 2013. Site was fertilized with 60 lb N using 30% UAN and 0.75 oz Harmony Extra SG® March 12, 2014. Site was fertilized with 50 lb N using 30% UAN cut 60/40 to reduce burn April 25, 2014. Fungicide applications were performed April 23 (flag leaf) and May 8 (heading), 2014. Harvest occurred June 10-16, 2014.

Orange - Planted October 9, 2013. Preplant fertilizer was 30-60-20 October 1, 2013. Sixty lb N plus .45 oz Harmony Extra SG® was applied March 11, 2014. Fungicide applications were performed April 28, 2014. Harvest occurred June 16, 2014.

Warsaw - Planted October 22, 2013. Preplant fertilizer was 30-60-60-5 applied October 18, 2013. Site was fertilized using 12-0-0-1.5 at 25 lb on November 21, 2013 and at 25 lb on February 26, 2014. Site was treated with 6.5 oz Starane® and .75 oz Harmony Extra SG® plus surfactant on March 11, 2014. Site was fertilized with 60 lb N using 24-0-0-3 April 3, 2014. Fungicide applications were performed April 24, 2014. Harvest occurred June 16, 2014.

Table 25. Summary of performance of malt-type entries in the Virginia Tech Management Test, Over locations, 2014 harvest.

Cultivar	Yield (Bu/a @ 48 lb/bu)	Moisture %	Test Weight lb/bu	Date Headed (Julian)	Height (In)	Lodging (0-9)	Leaf Rust (0-9)	Powdery Mildew (0-9)	Net Blotch (0-9)	Barley Yellow Dwarf Virus (0-9)
Thoroughbred	104.6	13.2	48.0	120.3	36.5	4.1	1.1	5.8	2.3	0.0
VA10B-43	102.3	13.3	48.1	117.6	35.0	4.8	0.2	1.3	0.8	0.0
VA12B-7	100.0	13.3	48.4	117.7	35.9	3.4	1.6	1.7	2.2	0.0
Saturn	99.3	13.4	45.0	121.8	31.1	4.4	0.4	1.0	1.9	0.3
McGregor	97.6	13.3	44.7	121.0	35.3	4.2	0.0	5.3	1.3	0.0
KWS Liga	90.3	13.5	47.5	124.0	32.6	3.4	0.1	1.8	0.9	1.2
VA09B-35	89.4	13.2	47.9	116.1	34.7	6.4	0.0	1.2	0.9	0.0
VA09B-34	86.5	13.3	48.8	115.5	34.3	4.5	0.2	0.8	1.1	0.0
Violetta	86.0	13.3	48.8	119.9	31.4	3.8	0.0	0.2	1.2	0.3
Endeavor	85.1	13.4	48.1	121.5	34.7	4.5	0.5	1.6	2.2	0.0
Charles	73.6	13.4	42.0	119.8	29.6	6.2	1.0	1.4	2.2	0.0
LSD (0.05)	4.2	0.6	0.6	0.4	0.8	0.9	0.6	0.8	0.5	0.6
CV	9.7									

Fungicide	Yield (Bu/a @ 48 lb/bu)	Moisture %	Test Weight lb/bu	Date Headed (Julian)	Height (In)	Lodging (0-9)	Leaf Rust (0-9)	Powdery Mildew (0-9)	Net Blotch (0-9)	Barley Yellow Dwarf Virus (0-9)
None	89.7	13.3	47.1	119.7	33.7	4.8	1.6	2.2	2.0	0.2
Tilt	95.0	13.3	47.1	119.4	34.0	4.4	0.0	2.0	1.2	0.2
Prosaro	91.3	13.4	46.8	119.6	33.8	4.5	0.2	2.2	1.7	0.2
Tilt+Prosaro	93.0	13.3	47.1	119.6	33.5	4.4	0.0	1.6	1.1	0.1
LSD (0.05)										

ns - no significant differences

Table 26. Summary of performance of malt-type entries in the Virginia Tech Management Test, Eastern Shore AREC, Painter, VA, 2014 harvest.

Cultivar	Yield (Bu/a @ 48 lb/bu)	Moisture %	Test Weight lb/bu	Powdery Mildew (0-9)	Net Blotch (0-9)
Saturn	110.7	14.6	48.5	1.0	1.0
McGregor	109.9	14.6	47.8	5.3	1.8
VA10B-43	104.9	14.5	50.7	1.3	0.6
KWS Liga	102.9	14.6	49.3	1.8	0.8
Thoroughbred	102.5	14.6	51.1	5.8	2.9
Violetta	96.3	14.2	52.7	0.2	0.8
VA12B-7	95.1	14.7	50.6	1.7	2.2
Endeavor	89.7	14.4	50.1	1.6	2.5
VA09B-34	88.9	14.8	49.6	0.8	0.7
VA09B-35	88.8	14.3	50.0	1.2	0.7
Charles	83.3	14.4	44.8	1.4	2.5
LSD (0.05)	8.2	0.6	1.7		
CV	10.3			0.8	0.8

Fungicide	Yield (Bu/a @ 48 lb/bu)	Moisture %	Test Weight lb/bu	Powdery Mildew (0-9)	Net Blotch (0-9)
None	95.8	14.4	50.1	2.2	1.4
Tilt	100.0	14.5	49.9	2.0	1.5
Prosaro	95.4	14.6	48.7	2.2	1.8
Tilt+Prosaro	98.9	14.5	49.5	1.6	1.3
LSD (0.05)					

ns - no significant differences

Table 27. Summary of performance of malt-type entries in the Virginia Tech Management Test, Northern Piedmont Center, Orange, VA, 2014 harvest.

Cultivar	Yield (Bu/a @ 48 lb/bu)	Moisture %	Test Weight lb/bu	Date Headed (Julian)	Height (In)
Thoroughbred	98.5	12.4	46.5	120.8	35.6
VA12B-7	94.9	12.2	47.0	118.3	34.8
VA10B-43	93.0	12.4	47.0	118.3	33.8
Saturn	81.6	12.3	43.0	121.0	30.4
VA09B-35	77.1	12.3	47.1	118.5	33.6
McGregor	76.0	12.5	43.5	121.0	34.3
VA09B-34	70.5	12.1	48.9	118.0	33.0
Endeavor	68.4	12.6	49.4	120.8	33.9
KWS Liga	66.0	12.3	47.0	121.0	31.6
Violetta	60.3	12.3	46.6	118.5	30.0
Charles	49.4	12.4	42.9	119.3	28.5
LSD (0.05)	7.8	0.1	0.7	0.7	1.2
CV	12.5				

Fungicide	Yield (Bu/a @ 48 lb/bu)	Moisture %	Test Weight lb/bu	Date Headed (Julian)	Height (In)
None	76.4	12.3	46.3	119.7	32.8
Tilt	77.8	12.3	46.1	119.3	32.8
Prosaro	73.4	12.4	46.4	119.6	32.6
Tilt+Prosaro	76.4	12.4	46.2	119.6	32.5
LSD (0.05)					

ns - no significant differences

Table 28. Summary of performance of malt-type entries in the Virginia Tech Management Test, Eastern Virginia AREC, Warsaw, VA, 2014 harvest.

Cultivar	Yield (Bu/a @ 48 lb/bu)	Moisture %	Test Weight lb/bu	Date Headed (Julian)	Height (In)	Lodging (0-9)	Leaf Rust (0-9)	Powdery Mildew (0-9)	Barley Yellow Dwarf Virus (0-9)
Thoroughbred	112.8	12.8	46.6	119.8	37.4	4.1	1.1	1.7	0.0
VA12B-7	110.0	13.0	47.8	117.1	37.1	3.4	1.6	2.2	0.0
VA10B-43	109.1	12.9	46.7	116.9	36.2	4.8	0.2	0.9	0.0
McGregor	107.9	12.9	43.1	121.1	36.3	4.2	0.0	0.8	0.0
Saturn	105.7	13.3	43.4	122.6	31.8	4.4	0.4	2.8	0.3
VA09B-35	102.2	13.1	46.9	113.8	35.8	6.4	0.0	1.1	0.0
KWS Liga	101.9	13.5	46.1	127.0	33.6	3.4	0.1	1.0	1.2
Violetta	101.5	13.4	47.3	121.3	32.8	3.8	0.0	1.6	0.3
VA09B-34	100.2	12.9	48.0	113.0	35.5	4.5	0.2	1.6	0.0
Endeavor	95.8	13.2	44.7	122.3	35.5	4.5	0.5	1.9	0.0
Charles	88.2	13.3	38.4	120.4	30.8	6.2	1.0	1.8	0.0
LSD (0.05)	5.7	0.3	0.4	0.3	1.0	0.9	0.6	0.5	0.6
CV	6.8								

Fungicide	Yield (Bu/a @ 48 lb/bu)	Moisture %	Test Weight lb/bu	Date Headed (Julian)	Height (In)	Lodging (0-9)	Leaf Rust (0-9)	Powdery Mildew (0-9)	Barley Yellow Dwarf Virus (0-9)
None	97.2	13.1	45.0	119.6	34.6	4.8	1.6	2.7	0.2
Tilt	107.1	13.1	45.6	119.5	35.1	4.4	0.0	1.0	0.2
Prosaro	104.5	13.1	45.3	119.6	35.1	4.5	0.2	1.7	0.2
Tilt+Prosaro	104.0	13.1	45.6	119.5	34.4	4.4	0.0	0.9	0.1
LSD (0.05)									

ns - no significant differences

Section 4: Wheat Varieties

Wheat trials were planted in seven-inch rows at Blackstone, Orange, Holland, Painter, and Shenandoah Valley. They were planted in six-inch rows at Blacksburg. They were planted in seven and one-half-inch rows at the Warsaw No-Till location. All no-till locations (Holland and Warsaw No-Till) and Shenandoah Valley were planted at 48 seeds per square foot. All other locations were planted at 44 seeds per square foot. Yields from Holland in the 2013 harvest year were not included in the over-location or over-year analyses.

Selecting the best wheat varieties is challenging but becomes easier with adequate information on performance over multiple environments. Past seasons across Virginia have provided the opportunity to evaluate day length 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- and over-location tables that are in the top-yielding group and that display good disease resistance.

The released varieties that yielded significantly higher than the statewide mean in 2014 were Pioneer Brand 26R10, SS 8360, USG 3404, AgriMaxx 434, Shirley, Pioneer Brand 25R40, USG 3523, Pioneer Brand 26R20, USG 3251, AgriMAXX 413, AgriMAXX 427, Pioneer Brand 26R41, and SS 8412. Pioneer Brand 26R20 and SS 8412 also had test weight that was significantly higher than the mean of all lines tested. Average yield of all lines tested in 2013-14 was 74 bushels per acre.

Pioneer Brand 26R10 had the highest two-year average yield. USG 3404, Pioneer Brand 26R41, Pioneer 25R40, USG 3251, AgriMaxx 434, USG 3523, Shirley, USG 3612, AgriMaxx 413, and SS 8340 all had grain yield significantly above the mean over the 2013 and 2014 harvests. SS 8340 also had test weight that was significantly higher than the two-year mean of all lines tested. The two-year average grain yield over all locations and varieties was 76 bushels per acre.

Producers who grow large acreages of wheat should plant two or more varieties having significantly different maturity dates in order to ensure harvest of high quality grain having high test weight and no sprouting. In Virginia it is typical for sporadic or consistent rain showers to interrupt harvest. These wetting and drying cycles and subsequent delays and significantly reduce grain test weight and quality. Growers can circumvent this problem by planting varieties that differ significantly in maturity. Early maturing varieties often can be harvested first and prior to significant rain showers, and later maturing varieties harvested subsequently will suffer less damage and losses in test weight and quality due to exposure to such a rain event.

Summary of wheat management practices for the 2014 harvest season (All rates are given on a per acre basis.)

Blacksburg - Planted September 30, 2013. Preplant fertilizer was 30-46-60 September 25, 2013. Site was sprayed with .6 oz Harmony Extra SG® on November 21, 2013. Site was fertilized with 25 lb N on February 11, 2014 and with 60 lb N plus 0.75 oz Harmony Extra SG® on April 2, 2014. Harvest occurred July 1, 2014.

Blackstone - Planted October 21, 2013. Preplant fertilizer was 300 lb 11-6-20 on September 18, 2013. Site was top-dressed with 60 lb N and K using UAN and 0-0-60, respectively, on February 25, 2014. Site was sprayed with .5 oz Harmony Extra SG® on February 25, 2014. Site was fertilized with 60 lb N using UAN on April 3, 2014. Harvest occurred June 23, 2014.

Warsaw - Planted no-till October 22-23, 2013. Preplant fertilizer was 30-60-60-5 applied October 18, 2013. Site was treated with 2.5 pt Gramaxone® on October 18, 2014. Site was fertilized using 12-0-0-1.5 at 50 lb on February 12, 2014 and at 60 lb using 24-0-0-3 on April 3, 2014. Site was treated with 6.5 oz Starane® and .75 oz Harmony Extra SG® plus surfactant on March 11, 2014. The fungicide-treated plots were sprayed with 4 oz Tilt® plus surfactant on April 10, 2014 and with 8 oz Prosaro® and 4 oz Tilt® plus surfactant on May 8, 2014. Harvest occurred June 24, 2014.

Painter - Planted October 24, 2013. Preplant fertilizer was 30 lb N on October 23, 2013. Site was fertilized with 60 lb N using 30% UAN and 0.75 oz Harmony Extra SG® March 12, 2014. Site was fertilized with 50 lb N using 30%UAN cut 60/40 to reduce burn April 25, 2014. Harvest occurred June 10-16, 2014.

Holland - Planted no-till October 28, 2013. Preplant fertilizer was 1/2 ton lime and 355 lb 5-13-30 on October 21, 2013. Site was fertilized with 60 units N using 24-0-0-3 plus 0.6 oz Harmony Extra SG® on February 20, 2014. Site was fertilized with 60 units N using 24-0-0-3 plus 0.6 oz Harmony Extra SG® on March 14, 2014. Harvest occurred June 17, 2014.

Orange - Planted October 17, 2013. Preplant fertilizer was 30-60-20 October 1, 2013. Sixty lb N plus 0.45 oz Harmony Extra SG® was applied March 11, 2014. Harvest occurred June 23, 2014.

Shenandoah Valley - Planted on October 31, 2013. Fifty lb N plus 0.6 oz Harmony Extra SG® were applied. Harvest occurred July 8, 2014.

Table 29. Summary of performance of entries in the Virginia Tech Wheat Test over location, 2014 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Blotch (0-9)		Powdery Mildew (0-9)		Stripe Rust Severity (%)		Stripe Rust Reaction (0-9)		Hessian Fly Resistance (Biotype)[1]	Awns[2]
	(7)		(7)		(2)		(3)		(5)		(1)		(1)		(1)		(3)		(1)		(1)			
Pioneer Brand 26R10	83.2	+	58.0	-	132.3		32.2		1.0		6.0	+	0.5		1.8		1.6		1.0	-	0.0		BCDOL	A
SS 8360	82.7	+	58.4		132.3		31.7		1.1		2.3		0.0		2.5	+	1.6		22.5		1.5		---	A
USG 3404	81.8	+	58.0	-	132.7		33.0		0.9		2.0		0.0		1.3		1.5		1.0	-	0.0		BCDOL	A
AgriMAXX Exp 1465	81.0	+	58.3	-	131.9		31.5		0.6		3.3		1.5	+	2.0		1.7	+	20.0		1.5		---	A
AgriMAXX 434	80.5	+	57.5	-	131.4		31.3		1.1		4.0		0.0		1.5		1.7	+	57.5	+	6.0	+		A
Shirley	80.3	+	57.7	-	132.1		31.1		0.7		1.5		0.0		1.0		0.1	-	57.5	+	9.0	+	C	AL
MAS #37	80.2	+	58.8		130.7		31.6		2.3	+	4.5	+	0.3		1.3		0.9		40.0	+	6.0	+	---	AL
Pioneer Brand 25R40	80.1	+	58.7		132.3		31.0		0.8		4.8	+	0.0		1.0		0.5	-	1.0	-	0.0		O	A
USG 3523	79.9	+	57.9	-	132.3		31.7		1.1		3.3		0.0		1.0		1.5		10.5		0.0			A
Pioneer Brand 26R20	79.5	+	59.0	+	132.3		33.9		1.9		3.3		0.0		1.0		0.9		30.0		1.5		CO	A
USG 3251	79.2	+	58.0	-	132.1		34.4		1.1		4.5	+	0.0		1.0		1.3		15.0		0.0		C	A
VA11W-108	79.1	+	58.8		131.1		34.6		0.8		1.3		0.0		1.0		0.4	-	1.0	-	0.0		BCD	A
AgriMAXX Exp 1444	79.0	+	57.7	-	132.4		33.5		1.3		2.8		0.5		1.8		1.5		1.0	-	0.0		---	A
MAS #34	78.9	+	57.7	-	132.3		30.5		1.3		1.5		0.0		1.0		0.9		55.0	+	9.0	+	---	A
AgriMAXX 413	78.6	+	56.7	-	131.0		31.2		0.8		3.3		1.0	+	1.3		1.5		1.0	-	0.0		C	A
AgriMAXX 427	78.6	+	57.5	-	131.3		34.0		1.6		3.3		0.0		2.0		0.9		10.0		1.5			TA
MAS #31	78.6	+	56.5	-	131.1		32.7		1.1		7.0	+	0.0		1.3		1.1		5.5		0.0		---	A
Pioneer Brand 26R41	78.5	+	58.5		132.1		31.2		0.6		1.8		0.0		2.0		1.1		1.0	-	0.0		BCDOL	A
SS 8412	78.2	+	60.2	+	131.6		31.6		1.2		1.8		0.0		1.0		0.5	-	25.0		3.0			TA
MAS #35	78.2	+	57.9	-	131.9		31.3		0.9		1.5		0.0		1.0		2.4	+	37.5	+	7.5	+	---	A
VA11W-182	78.0		56.8	-	131.3		28.1	-	1.0		1.8		0.0		1.0		0.5	-	50.0	+	9.0	+	---	AL
MAS #23	77.8		57.0	-	131.7		31.6		0.8		5.8	+	0.0		1.8		1.4		42.5	+	9.0	+	---	A
USG 3612	77.6		57.4	-	131.0		33.5		1.3		4.3	+	0.0		2.0		0.9		10.0		4.5			TA
Progeny 870	77.3		56.7	-	131.1		30.9		1.2		2.5		0.8		1.8		1.7	+	1.0	-	0.0			A
Pioneer Brand 26R12	77.3		57.4	-	131.6		34.5		1.5		4.3	+	0.0		1.8		2.1	+	7.5		0.0			A
Pioneer Brand 25R32	77.0		58.5		132.0		33.6		1.4		3.8		0.5		1.0		0.9		55.0	+	9.0	+	BCDOL	A
Featherstone 73	76.8		59.3	+	132.9		32.5		1.6		0.8	-	0.0		1.0		0.6		1.0	-	0.0			TA
SY 474	76.7		59.0	+	132.7		35.5	+	1.1		2.8		0.3		1.0		0.5	-	1.0	-	0.0		BC	TA
Steyer Hunker	76.5		57.7	-	132.6		35.1	+	1.8		4.8	+	0.0		1.8		2.5	+	1.0	-	0.0		BCDOL	TA
AgriMAXX 447	76.5		58.0	-	133.0		34.4		0.6		1.5		0.8		2.0		3.8	+	1.0	-	0.0		---	TA
SS 8340	76.3		59.7	+	131.3		32.3		0.9		2.3		0.0		1.8		1.7	+	1.0	-	0.0			A
VA11W-106	76.2		58.9		132.0		32.0		1.3		1.3		0.5		1.3		0.8		5.5		0.0			A
VA10W-140	76.1		60.2	+	131.6		34.0		1.4		1.3		0.0		1.3		1.2		80.0	+	9.0	+		TA

Table 29. Summary of performance of entries in the Virginia Tech Wheat Test over location, 2014 harvest, cont'd.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Blotch (0-9)		Powdery Mildew (0-9)		Stripe Rust Severity (%)		Stripe Rust Reaction (0-9)		Hessian Fly Resistance (Biotype)[1]	Awns[2]
	(7)		(7)		(2)		(3)		(5)		(1)		(1)		(1)		(3)		(1)		(1)			
Steyer Kidwell	76.0		56.8	-	130.7		31.0		1.1		3.0		0.3		1.8		1.7	+	3.0	-	0.0		---	A
SS 8870	75.9		59.0	+	132.6		34.1		1.6		1.5		0.0		1.5		1.5		1.0	-	0.0		---	TA
SS 8415	75.8		59.1	+	131.1		34.2		1.8		3.3		0.0		1.3		0.2	-	1.0	-	0.0		BCDOL	TA
AgriMAXX Exp 1450	75.8		57.9	-	131.4		34.0		0.7		1.0		0.0		1.8		0.7		27.5		3.0		---	A
MBX14-K-297	75.8		57.4	-	132.4		34.7		1.4		5.8	+	0.5		1.8		2.7	+	5.5		0.0		---	TA
MBX11-V-258	75.7		58.5		132.1		35.1	+	1.3		1.8		0.0		1.0		0.9		65.0	+	9.0	+	CO	TA
Progeny PGX 13-2	75.5		58.4		131.3		29.6	-	0.8		2.5		0.0		1.3		1.6		7.5		0.0		---	A
MBX14-S-210	75.4		58.0	-	131.7		33.9		0.8		2.0		0.3		1.3		0.7		30.0		0.0		---	TA
MAS #6	75.3		56.6	-	130.7		30.9		1.0		3.5		0.5		1.8		1.6		3.0	-	0.0		---	A
MAS #33	74.9		59.2	+	130.3		33.5		1.3		1.8		0.3		2.0		2.0	+	30.0		1.5		---	A
VA10W-123	74.8		59.3	+	129.4		33.7		2.8	+	4.3	+	0.0		1.0		0.3	-	1.0	-	0.0			TA
Progeny 125	74.7		57.7	-	128.6	-	31.8		1.1		4.3	+	0.0		3.0	+	2.5	+	3.0	-	0.0			TA
USG 3013	74.7		57.7	-	132.7		34.9		1.7		4.8	+	0.5		1.3		2.5	+	3.0	-	0.0			TA
Steyer Heilman	74.6		58.1	-	131.3		37.1	+	1.2		4.5	+	0.0		1.3		0.6		52.5	+	6.0	+	BCDOL	TA
MBX12-W-270	74.6		59.2	+	132.6		34.4		1.7		1.8		0.5		1.8		1.3		1.0	-	0.0			TA
VA11MAS-7520-2-3-255	74.5		58.7		131.7		30.2	-	1.2		1.3		0.0		1.0		0.8		25.0		4.5		---	A
Featherstone VA258	74.4		58.6		131.9		35.0	+	1.2		2.3		0.0		1.0		0.6		70.0	+	9.0	+	CO	TA
Progeny 357	74.3		56.2	-	133.3		32.3		1.1		6.8	+	0.3		1.0		3.0	+	30.0		3.0			A
Pioneer Brand 26R53	74.3		59.1	+	131.7		31.2		0.8		1.5		0.8		2.3	+	1.8	+	5.5		0.0		B	A
SS 5205	74.3		59.0	+	130.7		29.0	-	1.2		1.5		0.0		2.3	+	0.5	-	1.0	-	0.0			AL
USG 3833	74.3		57.9	-	133.0		34.3		0.7		1.3		0.0		1.8		3.9	+	1.0	-	0.0		---	TA
MAS #36	74.0		58.6		133.4		33.6		1.9		1.8		0.3		1.0		2.5	+	35.0	+	6.0	+	---	TA
VA11W-111	73.9		58.1	-	130.6		32.2		0.8		1.0		0.3		2.3	+	0.7		3.0	-	0.0		---	A
USG 3201	73.9		59.7	+	131.3		32.9		0.8		1.8		0.3		1.8		2.0	+	1.0	-	0.0		C	A
Dyna-Gro 9223	73.7		57.8	-	132.6		35.4	+	1.7		2.8		0.5		1.5		2.5	+	7.5		0.0			TA
Dyna-Gro 9171	73.3		56.7	-	130.9		30.4	-	1.2		2.5		1.5	+	2.0		1.7	+	1.0	-	0.0		C	A
VA12W-72	73.3		58.5		130.4		32.2		0.9		3.3		0.0		1.0		0.1	-	1.0	-	0.0		---	A
VA11W-279	73.3		60.5	+	130.6		30.2	-	1.4		1.3		0.0		1.0		0.1	-	1.0	-	0.0		---	AL
NC08-21273	73.3		59.4	+	131.4		31.9		1.8		4.3	+	0.3		1.0		1.1		85.0	+	9.0	+		AL
MAS #10	73.2		58.3	-	132.7		29.8	-	0.4		1.3		0.0		1.0		2.9	+	3.0	-	4.5		---	A
USG 3315	73.2		59.2	+	131.9		33.5		1.3		1.5		0.3		2.0		0.4	-	40.0	+	3.0		---	AL
Dyna-Gro 9042	73.1		58.0	-	132.1		31.3		1.1		3.0		0.3		1.0		0.8		1.0	-	0.0		O	TA
VA10W-42	72.9		58.7		130.0		34.4		1.7		1.5		0.0		2.0		2.2	+	25.0		1.5		BCD	A

Table 29. Summary of performance of entries in the Virginia Tech Wheat Test over location, 2014 harvest, cont'd.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Blotch (0-9)		Powdery Mildew (0-9)		Stripe Rust Severity (%)		Stripe Rust Reaction (0-9)		Hessian Fly Resistance (Biotype)[1]	Awns[2]
	(7)		(7)		(2)		(3)		(5)		(1)		(1)		(1)		(3)		(1)		(1)			
SY 007	72.8		58.2	-	129.9		33.0		1.2		2.5		0.0		1.8		0.4	-	1.0	-	0.0		---	A
VA11W-301	72.8		57.7	-	132.1		30.7		0.7		1.5		0.8		1.0		0.2	-	70.0	+	7.5	+		AL
VA11W-95	72.7		59.1	+	130.7		35.0	+	1.4		1.5		0.0		1.5		0.5	-	3.0	-	0.0		---	A
MBX12-W-296	72.7		58.0	-	131.3		37.2	+	1.4		4.3	+	0.3		1.3		1.1		45.0	+	6.0	+		A
MAS #7	72.6		57.9	-	132.0		31.6		1.3		3.8		0.5		1.0		0.7		1.0	-	0.0		---	TA
VA10W-96	72.5		60.7	+	129.0	-	33.8		1.4		1.0		0.3		1.5		0.0	-	1.0	-	0.0			A
MAS #2	72.5		59.8	+	132.7		36.7	+	2.9	+	1.8		0.3		2.3	+	1.1		30.0		4.5		---	TA
VA10W-119	72.1		59.9	+	130.1		34.1		1.1		2.0		0.0		1.0		1.0		42.5	+	6.0	+	BCDOL	A
VA08MAS-369	72.0		60.5	+	131.6		31.7		1.2		1.5		0.3		1.0		0.3	-	22.5		1.5			AL
VA12W-102	71.9		57.9	-	132.4		29.9	-	1.7		1.8		0.3		1.0		0.4	-	8.0		1.5		---	AL
MAS #32	71.8		58.1	-	131.9		31.3		1.4		3.5		0.3		1.3		1.6		37.5	+	7.5	+	---	A
USG 3438	71.8		56.6	-	131.0		31.1		0.9		3.3		0.5		1.5		1.1		1.0	-	0.0			A
MAS #4	71.7		59.6	+	131.3		32.5		0.8		1.8		0.0		1.8		1.8	+	1.0	-	0.0		---	A
VA11W-278	71.7		60.4	+	128.9	-	32.5		0.9		1.0		0.0		1.0		0.1	-	1.0	-	0.0		BCDOL	AL
Progeny 185	71.7		58.7		130.9		36.0	+	1.3		3.5		0.0		1.5		2.5	+	55.0	+	6.0	+	CDO	AL
VA10W-21	71.5		60.0	+	131.4		32.3		1.1		2.0		0.3		1.0		1.3		70.0	+	6.0	+		TA
USG 3993	71.5		59.1	+	132.3		33.8		1.7		1.5		0.3		1.5		1.9	+	1.0	-	0.0			TA
SY 483	71.4		57.5	-	133.7	+	34.4		1.2		2.5		1.5	+	2.0		0.7		1.0	-	0.0			TA
VA12FHB-37	71.3		58.6		132.6		31.9		0.8		2.0		0.0		1.0		0.6		50.0	+	6.0	+	---	A
AgriMAXX 415	71.3		59.5	+	131.4		33.0		0.9		2.0		0.0		1.8		1.5		3.0	-	0.0		C	A
VA12W-150	71.3		59.2	+	130.9		31.7		1.7		1.5		0.0		1.5		1.0		1.0	-	0.0		---	A
USG 3120	71.0		60.2	+	129.3		33.4		0.9		2.0		0.0		2.0		0.5	-	22.5		1.5			A
VA12FHB-53	70.9		59.1	+	131.1		32.1		1.7		1.0		0.3		1.0		0.0	-	22.5		6.0	+	---	TA
MD04W249-11-12	70.7		59.9	+	130.7		33.7		0.9		2.5		0.0		2.8	+	0.1	-	5.5		0.0		---	A
VA12FHB-85	70.6		58.6		132.4		34.2		1.2		2.3		0.0		1.0		0.9		57.5	+	9.0	+	---	A
MBX12-V-251	70.6		58.5		131.3		31.7		1.5		1.8		0.0		1.3		0.5	-	47.5	+	9.0	+	C	TA
Yorktown	70.6		59.0	+	131.6		33.0		2.2		1.5		0.0		1.8		0.2	-	3.0	-	0.0			TA
SS 520	70.3		57.7	-	129.3		34.4		1.7		3.8		1.8	+	1.8		0.5	-	75.0	+	6.0	+		AL
VA12W-54	70.3		59.0	+	128.7	-	30.7		1.3		1.5		0.0		1.0		0.1	-	1.0	-	0.0		---	AL
Merl	70.2		59.9	+	131.7		32.2		1.2		2.3		0.0		1.3		0.5	-	3.0	-	0.0			TA
USG 3024	70.2		59.9	+	131.0		31.3		0.8		1.0		0.0		1.3		0.1	-	1.0	-	0.0			A
VA11W-230	70.2		60.6	+	129.4		31.5		1.2		1.3		0.0		1.5		0.4	-	1.0	-	0.0		BCDOL	A
GA-041293-11E54	70.0		60.3	+	131.1		33.5		0.7		1.3		0.0		1.8		0.3	-	1.0	-	0.0		---	TA

Table 29. Summary of performance of entries in the Virginia Tech Wheat Test over location, 2014 harvest, cont'd.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Blotch (0-9)		Powdery Mildew (0-9)		Stripe Rust Severity (%)		Stripe Rust Reaction (0-9)		Hessian Fly Resistance (Biotype)[1]	Awns[2]
	(7)		(7)		(2)		(3)		(5)		(1)		(1)		(1)		(3)		(1)		(1)			
USG 3555	70.0		58.3	-	130.6		30.0	-	1.3		2.5		0.0		1.5		0.5	-	1.0	-	0.0			A
VA11W-313	70.0		57.4	-	128.4	-	30.2	-	1.1		2.0		0.0		1.0		1.0		1.0	-	0.0		---	A
Progeny PGX 13-1	69.9		58.0	-	133.0		34.7		0.7		1.0		0.8		2.3	+	3.7	+	3.0	-	0.0		---	TA
MD04W249-11-7	69.7	-	60.0	+	131.0		34.5		1.4		3.3		0.0		1.8		0.5	-	57.5	+	6.0	+		A
Progeny 117	69.5	-	58.9		129.4		34.1		2.5	+	3.3		0.8		2.5	+	1.9	+	17.5		0.0			AL
GA-04434-11E44	69.4	-	59.2	+	132.9		30.9		1.1		1.8		0.0		2.0		0.5	-	1.0	-	0.0		---	A
VA12W-26	69.4	-	59.2	+	131.4		29.0	-	1.5		2.5		0.5		0.8		0.5	-	15.0		6.0	+	---	A
GA-041293-11LE37	69.1	-	60.4	+	130.6		32.6		0.7		1.5		0.0		1.8		0.1	-	1.0	-	0.0		---	A
VA11W-FHB60	69.1	-	58.6		129.3		32.8		1.6		1.5		0.0		3.8	+	0.3	-	22.5		3.0		---	A
NC09-22402	68.7	-	58.8		132.1		33.1		1.3		2.0		0.5		1.8		0.4	-	1.0	-	0.0			TA
VA12FHB-34	68.7	-	59.0	+	130.4		35.0	+	1.6		1.8		0.0		1.3		0.5	-	5.5		0.0		---	A
L-Brand 221	68.6	-	61.1	+	131.1		35.0		2.0		1.3		0.0		1.0		1.1		67.5	+	9.0	+	---	AL
NC-Cape Fear	68.4	-	60.6	+	129.3		32.1		2.2		2.3		0.3		2.0		0.4	-	65.0	+	6.0	+		TA
Jamestown	66.2	-	60.5	+	128.3	-	31.3		1.2		2.0		0.0		1.8		0.3	-	5.5		0.0		BCD	A
Massey	62.3	-	59.4	+	131.7		37.5	+	2.2		5.5	+	1.0	+	1.3		0.6		60.0	+	7.5	+	B	AL
Average	74.0		58.6		131.4		32.8		1.3		2.5		0.2		1.5		1.1		19.3		2.3			
LSD (O.05)	4.1		0.3		2.3		2.3		1.0		1.7		0.7		0.8		0.6		14.5		2.7			
C.V.	10.0																							

Released cultivars are shown in bold print. Varieties are ordered by descending yield averages. A plus or or minus sign indicates a performance significantly above

minus sign indicates a pe 78.1 58.9 133.7 35.0 2.3 4.2 1.0 2.2 1.7

indicate a genotype's res 69.8 58.3 129.1 30.5 0.2 0.8 -0.5 0.7 0.6

or below the test average.

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

[1]Seedlings of some lines were tested for resistance to biotypes B, C, D, O, and L of Hessian Fly. Letter in column indicates varietal resistance.

Lines lacking letter were susceptible. Lines indicated by "---" were not tested.

[2]A=awned, AL=awnletted, TA=tip awned.

Table 30. Two year average summary of performance of entries in the Virginia Tech Wheat Tests, 2013 and 2014 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Blotch (0-9)		Early Lodging[1] (0-9)	
	(12)		(12)		(4)		(6)		(9)		(3)		(5)		(2)		(1)		(1)	
Pioneer Brand 26R10	84.7	+	57.7		129.8	+	34.4	-	1.2	-	3.8	+	1.7	+	2.1	+	1.8	+	0.0	
USG 3404	82.8	+	56.5	-	130.2	+	35.6		1.9		2.3		2.3	+	0.5	-	1.3		1.0	
Pioneer Brand 26R41	81.5	+	57.5		130.0	+	33.2	-	1.2	-	0.8	-	1.2		1.0		2.0	+	0.0	
Pioneer Brand 25R40	81.2	+	57.7		130.1	+	33.6	-	1.4	-	3.7	+	0.4	-	0.8		1.0		0.3	
USG 3251	81.0	+	57.9		130.7	+	37.1	+	2.1		3.8	+	1.4		1.3		1.0		1.0	
VA11W-108	80.7	+	57.5		128.5		36.5	+	1.3	-	0.6	-	0.4	-	0.9		1.0		4.0	
AgriMAXX 434	80.5	+	56.3	-	128.9		33.5	-	1.6	-	3.7	+	1.8	+	0.6	-	1.5		2.5	
USG 3523	80.5	+	57.1	-	129.9	+	35.1		2.1		3.8	+	1.7	+	1.5		1.0		0.3	
Shirley	80.3	+	57.3	-	129.7	+	34.0	-	1.7		0.5	-	0.2	-	1.1		1.0		0.5	
USG 3612	80.2	+	56.6	-	131.0	+	35.1		1.7		2.1		1.0		1.0		2.0	+	0.5	
VA10W-21	79.7	+	58.8	+	128.9		34.7		2.0		0.9	-	1.1		1.3		1.0		2.0	
AgriMAXX 413	79.6	+	56.2	-	128.3		33.2	-	1.5	-	2.1		1.6		2.4	+	1.3		1.3	
SS 8340	79.6	+	59.0	+	129.0		35.1		1.5	-	1.8		2.1	+	0.8		1.8	+	0.0	
AgriMAXX 427	79.1		56.8	-	128.8		36.1	+	2.4		3.8	+	1.2		1.4		2.0	+	0.0	
SS 8412	79.0		59.4	+	128.8		34.1	-	1.8		0.7	-	0.6	-	1.4		1.0		0.0	
VA10W-140	78.9		59.4	+	129.2		36.1	+	2.3		0.4	-	1.2		1.8		1.3		2.5	
Pioneer Brand 26R20	78.7		58.4	+	130.4	+	36.3	+	2.7	+	2.3		0.8		1.0		1.0		2.8	
Pioneer Brand 26R12	78.6		57.0	-	129.2		37.3	+	1.9		2.3		2.4	+	1.1		1.8	+	0.3	
Featherstone 73	78.5		59.0	+	131.1	+	35.0		2.6	+	0.3	-	0.9		0.8		1.0		4.3	+
SY 474	78.3		58.1		130.4	+	37.7	+	1.9		2.5		0.8		1.8		1.0		2.5	
SS 8415	78.3		58.2		129.1		36.0		2.8	+	2.3		0.3	-	1.6		1.3		4.5	+
Steyer Hunker	78.1		57.2	-	130.0	+	37.5	+	2.5		4.3	+	2.9	+	1.3		1.8	+	1.8	
Featherstone VA258	77.9		57.8		130.2	+	37.1	+	2.4		2.3		1.0		0.5	-	1.0		2.3	
Progeny 870	77.8		56.2	-	128.4		32.9	-	1.4	-	1.8		1.9	+	3.0	+	1.8	+	1.0	
USG 3013	77.8		57.1	-	130.1	+	37.2	+	2.4		4.3	+	2.9	+	1.6		1.3		1.3	
VA10W-123	77.7		58.4	+	126.5	-	36.1	+	3.7	+	3.1	+	0.3	-	1.1		1.0		2.8	
USG 3438	77.6		56.2	-	128.2	-	33.0	-	1.4	-	1.7		1.6		1.9		1.5		0.0	

Table 30. Two year average summary of performance of entries in the Virginia Tech Wheat Tests, 2013 and 2014 harvests, cont'd.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Blotch (0-9)		Early Lodging[1] (0-9)	
	(12)		(12)		(4)		(6)		(9)		(3)		(5)		(2)		(1)		(1)	
Progeny 357	77.4		55.6	-	130.9	+	35.4		1.9		5.0	+	3.4	+	1.5		1.0		2.0	
SS 5205	77.0		58.1		128.1	-	31.5	-	2.2		0.6	-	0.6	-	0.8		2.3	+	2.5	
VA11W-106	76.9		57.8		129.6	+	34.7		2.1		0.5	-	0.8		1.5		1.3		0.0	
AgriMAXX 415	76.9		58.9	+	128.9		35.1		1.7		1.5		1.9	+	1.4		1.8	+	1.3	
USG 3201	76.9		59.1	+	129.1		34.9		1.6	-	1.8		2.1	+	1.0		1.8	+	2.3	
Dyna-Gro 9223	76.8		57.1	-	130.2	+	37.5	+	2.4		3.7	+	3.0	+	1.8		1.5		2.5	
Dyna-Gro 9171	76.8		56.3	-	128.1	-	32.8	-	1.5	-	1.9		2.0	+	2.8	+	2.0	+	0.8	
Progeny 125	76.6		56.1	-	124.9	-	33.5	-	1.7		3.3	+	2.4	+	2.1	+	3.0	+	0.0	
Dyna-Gro 9042	76.5		57.4	-	129.6	+	34.5	-	1.6	-	3.8	+	1.5		2.1	+	1.0		1.5	
Pioneer Brand 25R32	76.2		58.3	+	130.6	+	36.0		2.2		3.4	+	0.8		1.8		1.0		0.8	
Progeny 185	76.2		58.1		128.9		38.2	+	1.6	-	2.6		2.7	+	1.3		1.5		0.0	
Pioneer Brand 26R53	75.8		58.6	+	129.5	+	33.2	-	1.2	-	1.6		1.9	+	1.3		2.3	+	1.0	
MBX11-V-258	74.8		57.4		130.0	+	37.5	+	2.1		1.8		1.3		0.5	-	1.0		0.8	
VA10W-119	74.8		59.0	+	127.0	-	36.3	+	2.5		0.8	-	1.2		0.6	-	1.0		4.5	+
VA08MAS-369	74.7		59.7	+	129.0		34.4	-	2.1		1.1	-	0.2	-	1.6		1.0		2.5	
VA10W-96	74.6		59.2	+	126.4	-	36.2	+	2.5		0.3	-	0.2	-	0.9		1.5		1.3	
VA11W-301	74.5		56.9	-	129.5	+	33.5	-	1.6	-	0.5	-	0.2	-	1.6		1.0		1.8	
USG 3120	74.5		58.9	+	125.6	-	35.8		2.3		0.8	-	1.0		0.5	-	2.0	+	4.3	+
Yorktown	74.3		58.4	+	128.9		34.8		2.9	+	0.5	-	0.2	-	0.9		1.8	+	3.5	
Steyer Heilman	74.3		57.6		129.2		40.2	+	2.0		3.8	+	1.1		1.4		1.3			
VA11W-31	74.1		58.3	+	127.7	-	35.1		2.1		0.5	-	0.1	-	0.9		1.0		1.3	
Progeny 117	73.8		57.6		125.9	-	36.3	+	3.2	+	1.7		1.9	+	1.5		2.5	+	2.5	
SS 520	73.4		56.4	-	126.6	-	36.1	+	2.5		1.4		0.6	-	2.8	+	1.8	+	1.8	
USG 3555	73.3		57.6		127.6	-	32.0	-	2.3		3.3	+	0.4	-	0.5	-	1.5		4.0	
VA11W-230	73.2		58.9	+	127.2	-	33.9	-	2.3		0.4	-	0.4	-	0.5	-	1.5		2.8	
MBX12-W-296	73.1		57.5		129.1		40.6	+	1.8		3.6	+	1.1		1.5		1.3		0.0	
VA10W-42	72.7	-	57.5		127.0	-	37.0	+	2.2		0.6	-	2.4	+	0.9		2.0	+	3.5	

Table 30. Two year average summary of performance of entries in the Virginia Tech Wheat Tests, 2013 and 2014 harvests, cont'd.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Blotch (0-9)		Early Lodging[1] (0-9)	
	(12)		(12)		(4)		(6)		(9)		(3)		(5)		(2)		(1)		(1)	
MBX12-W-270	72.7	-	58.1		129.6	+	37.0	+	2.4		1.2	-	1.4		1.6		1.8		1.3	
VA11W-278	72.6	-	58.7	+	125.9	-	34.6		2.2		0.3	-	0.4	-	1.1		1.0		2.3	
NC-Cape Fear	72.4	-	59.4	+	126.5	-	34.6		3.3	+	0.8	-	0.3	-	1.0		2.0	+	3.5	
Merl	72.4	-	59.2	+	129.1		34.2	-	2.1		2.8		0.6	-	1.9		1.3		0.8	
USG 3993	71.8	-	58.2		129.6	+	37.0	+	2.4		1.1	-	2.1	+	1.4		1.5		0.8	
MBX12-V-251	71.3	-	57.2		128.9		33.4	-	2.7	+	0.6	-	0.7	-	0.8		1.3		2.8	
SY 483	70.9	-	56.4	-	131.7	+	37.1	+	2.0		3.1	+	0.8		2.8	+	2.0	+	1.3	
Dyna-Gro 9343	70.6	-	57.9		130.1	+	37.0	+	2.7	+	1.4		1.5		1.4		2.3	+	2.0	
MD04W249-11-7	70.5	-	58.8	+	128.7		36.6	+	2.5		3.9	+	0.3	-	1.3		1.8	+	0.0	
NC08-21273	69.8	-	58.3		129.0		34.6		2.6	+	1.5		1.4		1.5		1.0		4.8	+
Jamestown	69.7	-	59.3	+	125.3	-	33.9	-	2.1		1.4		0.3	-	0.5	-	1.8	+	5.3	+
NC09-22402	69.5	-	57.5		129.2		35.0		2.4		1.1	-	0.5	-	2.4	+	1.8	+	5.3	+
Average	76.0		57.8		128.8		35.4		2.1		2.0		1.2		1.3		1.5		1.9	
LSD (O.05)	3.3		0.4		0.6		0.7		0.5		0.7		0.5		0.6		0.6		2.2	
C.V.	10.3																			

Released cultivars are shown in bold print. The number in parentheses below column headings indicates the number of location-years on which data are based. 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 or lodging where 0 = highly resistant and 9 = highly susceptible.

[1]Entries noted as lodging very early when assessed at the end of April were injured by spring freeze.

Table 31. Three year average summary of performance of entries in the Virginia Tech Wheat Tests, 2012, 2013, and 2014 harvests.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Blotch (0-9)		Early Lodging[1] (0-9)		Early Height[2] (In)	
	(18)		(17)		(6)		(9)		(12)		(5)		(9)		(5)		(1)		(1)		(2)	
Pioneer Brand 26R10	81.8	+	58.3		122.2	+	34.0		1.1	-	3.8	+	1.7	+	2.8		1.8		0.0	-	4.8	-
Pioneer Brand 26R41	81.7	+	58.3	-	122.2	+	32.6	-	1.2	-	0.8	-	1.0		2.0		2.0		0.0	-	4.7	-
VA10W-21	81.2	+	59.6	+	120.1		34.5		2.0		0.9	-	0.7	-	2.0		1.0		1.0		3.9	-
Shirley	80.9	+	57.7	-	121.7	+	33.3	-	1.5	-	0.5	-	0.1	-	2.0		1.0		0.3	-	6.9	
USG 3251	80.8	+	58.8		123.2	+	36.3	+	2.2		3.8	+	1.1		2.0		1.0		0.5	-	5.1	-
VA10W-123	80.1	+	58.8	+	117.0	-	35.9	+	3.5	+	3.1	+	0.2	-	2.1		1.0		3.0	+	6.7	
SS 8415	79.8		58.7		120.0		36.0	+	2.9	+	2.3		0.3	-	3.1	+	1.3		2.8		8.1	+
AgriMAXX 427	79.5		57.6	-	120.3		35.1		2.5		3.8	+	1.3		2.1		2.0		0.6	-	6.9	
Featherstone VA258	79.4		58.3	-	121.2	+	36.5	+	3.0	+	2.3		0.9		1.9	-	1.0		2.1		8.3	+
SS 5205	79.4		58.9	+	119.2	-	31.0	-	2.5		0.6	-	0.6	-	1.7	-	2.3	+	1.3		2.8	-
USG 3612	79.4		57.5	-	118.1	-	34.8		2.2		2.1		1.2		1.9	-	2.0		0.0	-	4.8	-
SS 8412	79.2		59.9	+	119.3	-	33.6	-	1.9		0.7	-	0.8	-	2.4		1.0		0.0	-	4.9	-
Pioneer Brand 26R20	79.1		59.0	+	122.8	+	35.7	+	2.8	+	2.3		1.0		2.6		1.0		1.4		7.8	+
AgriMAXX 413	78.8		56.7	-	120.6	+	32.6	-	1.4	-	2.1		1.4		3.9	+	1.3		0.3	-	5.0	-
Featherstone 73	78.7		59.5	+	122.3	+	34.2		2.7	+	0.3	-	0.7	-	1.8	-	1.0		2.5		4.8	-
VA10W-140	78.6		60.2	+	121.2	+	35.4	+	2.5		0.4	-	1.3		2.6		1.3		3.3	+	4.9	-
USG 3120	78.4		59.3	+	115.0	-	35.4	+	2.6		0.8	-	0.7	-	1.5	-	2.0		5.6	+	8.0	+
USG 3555	77.6		58.1	-	117.5	-	31.6	-	2.7		3.3	+	0.5	-	1.4	-	1.5		4.8	+	9.2	+
SS 8340	77.6		59.5	+	121.7	+	34.3		1.4	-	1.6		2.1	+	2.0		1.8		0.0	-	4.5	-
USG 3438	77.4		56.7	-	120.4		32.4	-	1.3	-	1.7		1.5		3.5	+	1.5		0.0	-	4.7	-
Yorktown	77.3		59.0	+	118.8	-	34.1		3.0	+	0.5	-	0.2	-	1.8	-	1.8		2.0		8.1	+
Progeny 870	77.3		56.6	-	120.8	+	32.2	-	1.3	-	1.8		1.6	+	4.3	+	1.8		0.5	-	4.4	-
Pioneer Brand 25R32	76.8		59.0	+	123.3	+	35.4	+	2.4		3.4	+	0.6	-	2.8		1.0		0.4	-	4.9	-
USG 3201	76.7		59.6	+	121.2	+	34.3		1.6	-	1.8		2.2	+	1.6	-	1.8		1.1		8.3	+
VA10W-119	76.7		59.3	+	116.8	-	36.0	+	2.9	+	0.8	-	1.0		1.6	-	1.0		5.1	+	5.2	-
Progeny 357	76.4		56.3	-	123.2	+	34.8		1.9		5.0	+	3.0	+	2.5		1.0		1.0		5.3	-
Dyna-Gro 9042	76.4		58.0	-	122.0	+	33.9		1.7	-	3.8	+	1.2		3.0	+	1.0		0.0	-	4.4	-

Table 31. Three year average summary of performance of entries in the Virginia Tech Wheat Tests, 2012, 2013, and 2014 harvests, cont'd.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Barley Yellow Dwarf Virus (0-9)		Leaf Blotch (0-9)		Early Lodging[1] (0-9)		Early Height[2] (In)	
	(18)		(17)		(6)		(9)		(12)		(5)		(9)		(5)		(1)		(1)		(2)	
Progeny 117	76.4		58.1	-	115.5	-	36.3	+	3.6	+	1.7		2.3	+	2.2		2.5	+	1.3		4.5	-
Progeny 185	76.3		58.5		120.0		37.1	+	1.8		2.6		2.2	+	2.4		1.5		0.0	-	4.4	-
Dyna-Gro 9171	76.0		56.6	-	120.3		32.5	-	1.6	-	1.9		1.6	+	4.0	+	2.0		0.4	-	8.4	+
AgriMAXX 415	75.8		59.3	+	121.6	+	34.2		1.8		1.5		2.1	+	2.3		1.8		0.6	-	8.7	+
VA08MAS-369	75.7		60.2	+	119.7		33.7	-	2.3		1.1	-	0.6	-	2.4		1.0		1.9		8.8	+
Merl	75.7		59.7	+	120.4		33.9		2.1		2.8		0.4	-	2.9	+	1.3		0.4	-	4.3	-
Dyna-Gro 9223	75.6		57.9	-	122.5	+	36.7	+	2.3		3.7	+	3.6	+	3.0	+	1.5		0.8	-	8.7	+
SS 520	75.2		57.3	-	116.3	-	35.4	+	3.0	+	1.4		0.5	-	3.7	+	1.8		1.8		8.6	+
Pioneer Brand 26R53	75.2		59.2	+	121.8	+	32.7	-	1.3	-	1.6		2.0	+	2.0		2.3	+	0.5	-	3.9	-
MBX12-V-251	75.2		57.7	-	121.6	+	32.9	-	3.2	+	0.4	-	0.7	-	1.6	-	1.3		2.8		7.8	+
NC-Cape Fear	75.1		59.6	+	116.4	-	33.8		3.8	+	0.8	-	0.3	-	1.9	-	2.0		3.9	+	7.8	+
Jamestown	74.9		59.8	+	115.1	-	33.4	-	2.7		1.4		0.3	-	1.7	-	1.8		4.6	+	9.4	+
Progeny 125	74.6		56.8	-	114.6	-	33.0	-	1.6	-	3.3	+	1.8	+	2.6		3.0	+	0.0	-	6.7	
Pioneer Brand 26R12	73.7	-	58.5		121.4	+	36.3	+	1.5	-	2.3		1.8	+	2.0		1.8		0.1	-	7.5	+
Massey	62.3	-	58.6		118.5	-	38.4	+	3.5	+	6.0	+	0.7	-	3.3	+	1.3		5.5	+	6.0	
Average	77.3		58.5		119.9		34.4		2.3		2.1		1.2		2.4		1.5		1.5		6.2	
LSD (O.05)	2.8		0.3		0.6		0.6		0.5		0.7		0.4		0.5		0.6		1.4		0.8	
C.V.	11.0																					

Released cultivars are shown in bold print. The number in parentheses below column headings indicates the number of

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

[1]Entries noted as lodging very early when assessed at the end of April were injured by spring freeze.

[2]Early plant height, assessed in early spring when wheat begins to elongate, provides information related to photoperiod sensitivity.

Table 32. Summary of performance of entries in the Virginia Tech Wheat Test planted No-Till at Warsaw, 2014 harvest.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)	
Dyna-Gro 9042	77.8		80.0		82.6	+	58.0		129.0		30.7		0.0	
MAS #34					82.3	+	57.1	-	130.0	+	29.0	-	0.0	
AgriMAXX Exp 1465					82.1	+	57.8		129.0		29.2	-	0.0	
Pioneer Brand 26R20	81.4		77.2		81.9	+	57.8		130.0	+	32.2		0.0	
MBX14-S-210					81.8	+	57.2	-	129.0		32.7		0.0	
MAS #35					81.1	+	58.1		129.3		30.0		0.0	
SS 8360					80.7	+	58.0		129.7		30.0		0.0	
USG 3612	---		---		80.2	+	57.4		128.3		32.7		0.7	
USG 3201	75.7		74.0		79.7		58.9		129.0		31.3		0.0	
USG 3404			84.5	+	79.5		57.9		130.0	+	30.5		0.0	
AgriMAXX 427	79.9		80.1		79.5		57.5		129.0		32.0		0.0	
Pioneer Brand 26R10	82.0		81.3	+	79.4		58.0		130.0	+	30.3		0.0	
SY 007					79.3		57.9		127.3	-	31.0		0.3	
Pioneer Brand 26R12	76.4		78.7		79.2		56.7	-	128.7		32.7		0.0	
SS 520	79.3		73.7		79.2		57.8		126.0	-	34.3	+	0.3	
USG 3523			78.7		79.2		57.8		130.0	+	29.7		0.0	
Pioneer Brand 26R41	80.6		74.1		78.9		58.4		129.3		29.3	-	0.0	
AgriMAXX Exp 1444					78.6		57.9		130.0	+	30.7		0.0	
VA12W-54					78.4		58.6		127.0	-	30.3		0.0	
USG 3251	80.5		79.9		77.8		58.1		129.7		32.0		0.0	
MAS #37					77.7		58.3		128.3		30.7		0.7	
Steyer Hunker			82.8	+	77.6		57.2	-	130.7	+	33.5	+	0.0	
Pioneer Brand 25R40			76.3		77.5		58.2		130.0	+	30.2		0.0	
MAS #33					77.5		58.4		128.0	-	31.2		0.0	
AgriMAXX 413	79.3		79.2		77.4		56.2	-	128.3		29.7		0.0	
SS 8412	79.9		76.5		77.2		59.6	+	129.0		31.0		0.0	
AgriMAXX 415	77.8		78.2		77.2		58.9		129.0		30.7		0.0	
MAS #7					77.2		57.5		128.7		30.5		0.0	
VA10W-42			76.0		77.0		58.6		127.7	-	32.3		0.0	
Steyer Kidwell					76.9		56.4	-	128.0	-	29.2	-	0.0	
Featherstone 73	77.6		76.0		76.9		59.1	+	130.3	+	31.0		0.0	
Featherstone VA258	78.8		77.0		76.9		58.8		129.3		33.2	+	0.3	
VA11W-278			76.0		76.7		59.8	+	126.3	-	31.3		0.0	
Merl	75.9		71.1		76.6		59.5	+	129.0		32.2		0.0	
VA12FHB-53					76.4		58.2		128.7		29.3	-	1.0	+
MBX14-K-297					76.2		56.9	-	130.3	+	33.3	+	0.0	
VA11W-111					76.1		57.8		128.0	-	30.7		0.0	
Dyna-Gro 9223	79.0		75.4		76.0		57.0	-	130.0	+	33.3	+	0.0	
MAS #36					76.0		57.9		130.7	+	31.3		0.0	

Table 32. Summary of performance of entries in the Virginia Tech Wheat Test planted No-Till at Warsaw, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)	
AgriMAXX 434			78.7		76.0		56.9	-	129.0		28.8	-	0.0	
USG 3013			82.3	+	75.8		57.0	-	131.0	+	33.0	+	0.0	
USG 3315	---		---		75.6		59.0		129.0		31.0		0.0	
Progeny 870	74.7		73.1		75.5		56.2	-	128.7		30.0		0.0	
SS 8340	76.1		77.2		75.3		58.8		129.0		30.8		0.0	
VA12W-102					75.3		58.0		130.0	+	29.3	-	0.7	
VA11W-230			75.5		74.9		60.3	+	127.0	-	31.3		0.0	
USG 3438	81.2		77.5		74.8		56.1	-	128.3		29.7		0.0	
Dyna-Gro 9171	80.6		75.9		74.8		56.3	-	128.0	-	28.8	-	0.0	
MBX12-W-296			71.4		74.6		56.7	-	128.7		35.2	+	0.0	
AgriMAXX Exp 1450					74.6		56.9	-	129.0		32.5		0.0	
MAS #6					74.4		56.0	-	128.7		29.3	-	0.0	
VA11W-31			77.4		74.4		59.3	+	127.7	-	30.8		0.0	
VA11W-182					74.3		57.2	-	128.7		26.0	-	0.0	
Progeny 357	75.5		78.1		74.0		57.3	-	131.0	+	29.5	-	0.0	
MAS #31					74.0		56.6	-	128.3		30.2		0.0	
VA11W-106			75.8		73.9		58.3		130.0	+	30.2		0.0	
Pioneer Brand 25R32	75.7		72.6		73.8		57.4		129.3		32.3		0.0	
MAS #32					73.7		57.1	-	129.7		30.3		0.0	
MAS #4					73.6		58.2		129.0		30.3		0.0	
AgriMAXX 447					73.5		58.2		131.0	+	31.3		0.0	
Progeny 125	73.7		72.1		73.5		56.9	-	125.0	-	30.0		0.0	
MAS #23					73.4		56.9	-	129.7		30.8		0.0	
VA10W-21	78.7		80.3		73.4		59.6	+	129.0		31.8		0.0	
VA11W-108			73.5		73.4		58.4		129.0		32.0		0.0	
MBX12-V-251	74.7		76.7		73.3		58.5		128.7		30.7		0.7	
VA10W-123	82.2		79.1		73.1		59.2	+	126.3	-	31.0		3.7	+
VA11W-279					73.1		60.0	+	128.3		29.3	-	0.3	
VA11W-FHB60					73.0		58.2		126.3	-	31.3		0.0	
VA12W-72					72.9		58.2		128.3		30.7		0.3	
SY 483			73.7		72.7		56.9	-	131.0	+	32.2		0.0	
Pioneer Brand 26R53	76.7		75.0		72.7		58.9		129.0		29.7		0.0	
Steyer Heilman			72.1		72.4		57.0	-	129.0		35.0	+	0.0	
Shirley	78.3		73.7		72.3		57.7		129.7		29.3	-	0.0	
MAS #2					72.1		59.0	+	130.7	+	36.0	+	1.3	+
SS 5205	75.7		72.6		72.1		58.7		128.3		27.5	-	0.0	
MAS #10					72.1		58.1		130.3	+	27.7	-	0.0	
Progeny PGX 13-2					72.1		57.7		128.7		28.5	-	0.0	
Yorktown	78.7		71.5		72.1		58.8		129.0		31.8		0.0	

Table 32. Summary of performance of entries in the Virginia Tech Wheat Test planted No-Till at Warsaw, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)	
USG 3833					72.1		57.7		130.7	+	32.0		0.0	
VA10W-119	80.5		73.2		71.8		59.6	+	127.7	-	33.0	+	0.0	
MBX12-W-270			73.1		71.7		59.0	+	130.7	+	31.7		0.0	
SS 8415	85.1	+	76.2		71.5		58.6		128.3		33.0	+	0.3	
Jamestown	76.8		69.4		71.4		60.1	+	125.3	-	29.8		0.0	
USG 3993			71.9		71.1		58.8		129.7		32.0		0.0	
SY 474			76.4		71.0		58.2		130.7	+	33.5	+	0.0	
NC-Cape Fear	76.7		71.3		70.9		60.0	+	127.0	-	30.5		1.0	+
VA11W-95					70.9		58.3		128.7		33.7	+	0.0	
Progeny PGX 13-1					70.9		57.8		130.7	+	32.3		0.0	
VA11W-301			71.7		70.8		57.0	-	130.0	+	28.7	-	0.0	
USG 3120	79.6		70.2		70.8		59.9	+	126.7	-	32.3		0.0	
SS 8870					70.8		58.9		131.0	+	32.5		0.0	
L-Brand 221					70.7		60.3	+	129.3		34.2	+	1.0	+
VA10W-96			74.2		70.6		60.4	+	126.7	-	32.7		0.0	
VA12FHB-34					70.3		57.9		128.3		33.8	+	1.0	+
Progeny 117	80.4		74.2		70.3		57.9		127.3	-	33.8	+	1.3	+
VA12W-26					70.3		59.3	+	129.0		28.5	-	0.3	
USG 3555	76.5		73.3		69.9		57.9		128.3		28.5	-	0.0	
NC08-21273			67.5	-	69.6		58.7		129.0		30.7		0.3	
VA08MAS-369	79.9		75.9		69.2		59.5	+	129.0		30.7		0.0	
MBX11-V-258			75.8		69.2		58.0		129.7		35.0	+	0.0	
USG 3024			65.0	-	69.1		59.1	+	128.3		30.5		0.0	
VA10W-140	73.4		70.1		69.0		59.3	+	129.0		32.7		0.0	
Progeny 185	73.6		71.0		68.5		57.8		129.3		34.0	+	0.0	
VA11W-313					68.4		57.8		126.0	-	27.5	-	0.3	
Dyna-Gro 9343			68.0	-	68.1		58.4		131.0	+	33.3	+	0.0	
VA12FHB-85					68.1		58.5		130.3	+	33.0	+	0.0	
VA12W-150					67.9		58.5		129.0		30.0		1.0	+
MD04W249-11-12					67.8		59.0		128.7		31.3		0.0	
GA-041293-11E54					67.5	-	59.4	+	128.7		32.8		0.0	
MD04W249-11-7			71.4		67.4	-	58.9		129.0		33.0	+	0.0	
GA-04434-11E44					66.4	-	58.9		131.3	+	29.7		0.0	
NC09-22402			69.7		65.1	-	58.3		129.3		31.3		0.0	
VA12FHB-37					64.9	-	58.6		130.7	+	29.2	-	0.0	

Table 32. Summary of performance of entries in the Virginia Tech Wheat Test planted No-Till at Warsaw, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)	
VA11MAS-7520-2-3-255					64.3	-	58.0		129.0		28.2	-	0.0	
Massey	65.9	-	63.2	-	62.2	-	59.3	+	129.3		36.8	+	1.3	+
GA-041293-11LE37					61.8	-	59.3	+	128.0	-	33.0	+	0.0	
Average	77.9		74.9		73.8		58.2		129.0		31.2		0.2	
LSD (O.05)	5.1		5.6		6.1		0.8		0.8		1.8		0.8	
C.V.	8.0		6.5		5.0									

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.

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

Table 33. Summary of performance of fungicide-treated entries in the Virginia Tech Wheat Test planted No-Till at Warsaw, 2014 harvest.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)	
Pioneer Brand 26R10	84.7	+	85.2	+	94.0	+	57.9		130.0	+	33.0		0.0	
USG 3013			88.2	+	91.5	+	57.2		130.7	+	34.7		0.0	
SS 8870					90.6	+	59.6	+	130.7	+	34.0		0.0	
Pioneer Brand 26R20	82.4		81.0		90.6	+	57.5		130.0	+	33.0		0.0	
Dyna-Gro 9343			79.6		90.2	+	59.3	+	130.7	+	33.3		0.0	
Dyna-Gro 9042	80.3		83.2	+	89.6	+	57.8		129.3		31.3		0.0	
Featherstone 73	82.5		83.0	+	89.6	+	58.8	+	130.3	+	33.7		0.0	
SS 8360					89.2	+	57.8		130.3	+	32.0		0.0	
AgriMAXX Exp 1444					88.9	+	57.7		130.0	+	32.3		0.0	
USG 3251	81.2		82.7	+	88.0	+	57.8		130.0	+	32.0		0.0	
SS 5205	80.1		80.8		87.6	+	58.7	+	129.0		31.3		0.0	
MBX14-K-297					87.3	+	57.1	-	130.7	+	34.0		0.0	
MAS #35					87.2	+	57.2	-	129.3		31.3		0.0	
USG 3404			80.0		87.1	+	57.6		131.0	+	32.0		0.0	
Steyer Hunker			83.7	+	87.0	+	57.1	-	130.3	+	34.7		0.0	
VA11W-182					85.8		56.1	-	129.0		27.7	-	0.0	
MAS #7					85.7		57.3		129.0		33.0		0.0	
AgriMAXX Exp 1465					85.6		57.7		129.7		31.0		0.0	
Pioneer Brand 26R12	77.4		79.5		85.4		56.5	-	128.7		34.0		0.0	
MAS #37					84.7		57.8		127.3	-	32.3		0.0	
VA11W-111					84.5		57.6		127.3	-	32.3		0.0	
USG 3833					84.3		58.6	+	130.3	+	35.0	+	0.0	
AgriMAXX 427	81.1		81.1		84.2		56.8	-	128.0	-	33.3		0.0	
Pioneer Brand 25R32	77.5		76.8		84.2		58.1		129.7		33.0		0.0	
MAS #31					84.1		56.5	-	129.0		32.3		0.0	
USG 3438	81.2		80.0		83.9		56.0	-	129.0		31.3		0.0	
USG 3612	---		---		83.8		57.0	-	128.0	-	33.0		0.0	
VA12FHB-34					83.7		57.5		128.3		36.0	+	0.0	
MAS #36					83.4		58.2		131.3	+	33.7		0.0	
MAS #6					83.2		55.8	-	127.7	-	30.0	-	0.0	
USG 3201	77.5		78.1		82.3		58.4	+	129.0		33.3		0.0	
SY 007					82.3		56.9	-	127.0	-	32.7		0.0	
Dyna-Gro 9223	81.2		79.7		81.9		56.9	-	130.3	+	34.0		0.0	
USG 3993			77.3		81.6		58.6	+	131.0	+	33.0		0.0	
Pioneer Brand 25R40			79.0		81.5		57.0	-	129.3		31.0		0.0	
Pioneer Brand 26R41	81.8		77.6		81.5		57.7		129.7		32.3		0.3	+
SY 474			78.0		81.4		57.5		129.7		34.7		0.0	
Progeny 357	79.6		81.3		81.3		56.1	-	130.7	+	32.0		0.0	
Shirley	79.0		77.9		80.9		57.0	-	130.0	+	30.3	-	0.0	

Table 33. Summary of performance of fungicide-treated entries in the Virginia Tech Wheat Test planted No-Till at Warsaw, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)	
Merl	80.0		80.4		80.9		59.0	+	128.7		34.0		0.0	
VA12W-102					80.9		57.4		130.0	+	29.3	-	0.0	
MAS #33					80.8		57.6		127.3	-	34.7		0.0	
VA11W-230			76.9		80.8		59.7	+	127.3	-	31.7		0.0	
Steyer Kidwell					80.6		56.0	-	128.7		29.7	-	0.0	
AgriMAXX 434			81.8		80.5		56.5	-	128.7		30.7		0.0	
MAS #34					80.5		56.6	-	130.0	+	29.7	-	0.0	
Progeny 117	82.6		77.3		79.8		57.4		126.7	-	34.3		0.3	+
VA10W-42			77.2		79.3		57.9		127.7	-	34.7		0.0	
Progeny 125	75.4		74.6		79.2		56.1	-	125.0	-	30.3	-	0.0	
NC-Cape Fear	77.8		75.4		79.0		59.1	+	127.0	-	32.7		0.0	
MAS #10					79.0		58.1		131.0	+	29.3	-	0.0	
VA10W-140	75.9		76.3		78.8		58.8	+	129.0		34.3		0.0	
VA12W-54					78.7		58.7	+	127.3	-	30.3	-	0.0	
VA11W-279					78.6		59.5	+	128.0	-	29.3	-	0.0	
MBX14-S-210					78.6		57.0	-	129.3		34.0		0.0	
MBX12-V-251	81.4		78.8		78.6		57.5		128.7		31.0		0.0	
SY 483			76.7		78.5		57.3		130.7	+	34.7		0.0	
MAS #23					78.2		56.5	-	129.3		30.3	-	0.0	
AgriMAXX 415	78.2		78.2		78.2		57.9		129.0		31.3		0.0	
MAS #4					78.1		58.2		129.0		33.0		0.0	
Featherstone VA258	77.6		77.9		77.9		57.5		129.3		36.0	+	0.0	
Dyna-Gro 9171	82.7		78.9		77.7		56.1	-	128.7		29.7	-	0.0	
SS 8340	71.2	-	72.8		77.2		58.1		129.0		31.7		0.0	
Pioneer Brand 26R53	75.7		75.3		77.0		58.1		129.3		30.0	-	0.0	
Progeny PGX 13-2					76.9		57.3		128.7		30.7		0.0	
Steyer Heilman			72.9		76.7		56.5	-	129.0		36.0	+	0.0	
VA11W-278			75.1		76.7		59.4	+	127.0	-	33.7		0.0	
AgriMAXX Exp 1450					76.7		56.7	-	129.0		33.7		0.0	
MBX12-W-270			75.9		76.6		58.5	+	130.7	+	33.0		0.0	
MAS #32					76.5		56.7	-	129.3		32.7		0.0	
Progeny 870	75.7		74.0		76.3		55.7	-	129.0		30.3	-	0.0	
VA12FHB-37					76.2		58.6	+	130.0	+	31.3		0.0	
MD04W249-11-7			75.8		76.2		58.5	+	129.0		35.7	+	0.0	
VA10W-123	79.9		78.4		76.2		58.6	+	126.7	-	34.0		1.0	+
MBX12-W-296			70.7	-	76.1		56.5	-	128.7		34.3		0.0	
VA11W-106			75.7		76.1		57.9		130.0	+	32.0		0.0	
VA11W-108			73.3		75.6		57.8		129.0		33.0		0.0	
AgriMAXX 413	76.8		78.5		75.2		55.7	-	129.0		30.0	-	0.0	

Table 33. Summary of performance of fungicide-treated entries in the Virginia Tech Wheat Test planted No-Till at Warsaw, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)	
Yorktown	76.8		73.7		75.1		57.8		129.0		33.7		0.0	
USG 3523			76.8		75.1		56.9	-	130.0	+	31.3		0.0	
VA12FHB-85					75.0		57.7		130.3	+	35.3	+	0.3	+
VA12W-150					75.0		58.7	+	129.0		33.0		0.0	
VA11W-301			74.2		74.7		56.9	-	129.7		29.0	-	0.0	
VA12FHB-53					74.6		57.5		129.3		31.0		0.0	
VA11W-31			75.6		74.6		58.7	+	128.3		32.7		0.0	
USG 3120	79.5		76.5		74.5		59.0	+	125.7	-	34.3		0.0	
SS 520	81.0		78.4		74.5		57.0	-	126.3	-	32.7		0.0	
GA-041293-11E54					74.5		59.3	+	129.0		33.3		0.0	
VA10W-96			74.5		74.2		59.6	+	127.0	-	34.3		0.0	
SS 8415	85.6	+	80.1		74.2		58.3		128.0	-	32.7		0.0	
VA10W-21	75.4		75.1		74.2		58.7	+	129.0		33.0		0.0	
SS 8412	77.8		76.4		74.1		58.9	+	129.3		32.0		0.0	
L-Brand 221					73.9		59.2	+	129.7		36.0	+	0.0	
VA12W-26					73.7		58.6	+	129.3		29.0	-	0.0	
VA11W-FHB60					73.3		58.2		126.3	-	32.7		0.0	
Progeny 185	71.7	-	72.7		73.1		58.0		130.0	+	36.3	+	0.0	
USG 3024			69.3	-	72.6		58.7	+	127.3	-	31.0		0.0	
VA11W-95					72.6		57.9		128.7		33.3		0.0	
NC09-22402			72.9		72.5		57.7		129.0		32.7		0.0	
MAS #2					72.5		58.7	+	130.3	+	36.0	+	0.0	
NC08-21273			68.7	-	72.5		58.8	+	129.0		31.0		0.0	
Jamestown	78.3		74.8		72.5		59.3	+	125.3	-	32.7		0.0	
Progeny PGX 13-1					72.1		57.7		131.0	+	33.7		0.0	
GA-04434-11E44					71.7		58.9	+	131.0	+	31.0		0.0	
MBX11-V-258			74.9		71.7		57.6		130.0	+	36.0	+	0.0	
USG 3315	---		---		71.4	-	58.0		129.7		32.3		0.0	
MD04W249-11-12					70.8	-	58.4	+	128.7		33.7		0.0	
USG 3555	75.7		70.3	-	70.6	-	57.4		129.0		29.0	-	0.0	
VA10W-119	79.0		73.3		70.2	-	58.7	+	127.7	-	34.3		0.0	
AgriMAXX 447					69.5	-	57.6		130.7	+	33.7		0.0	
VA11MAS-7520-2-3-255					69.0	-	57.4		130.0	+	29.3	-	0.0	
VA11W-313					68.9	-	56.7	-	126.0	-	30.0	-	0.0	

Table 33. Summary of performance of fungicide-treated entries in the Virginia Tech Wheat Test planted No-Till at Warsaw, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)	
Massey	69.9	-	67.4	-	68.5	-	58.7	+	129.3		39.3	+	0.3	+
VA12W-72					68.0	-	57.4		128.3		32.0		0.0	
GA-041293-11LE37					67.1	-	59.1	+	128.7		32.7		0.0	
VA08MAS-369	73.0	-	68.9	-	67.0	-	59.4	+	129.0		31.3		0.0	
Average	78.6		77.0		78.7		57.8		129.0		32.6		0.0	
LSD (O.05)	5.4		4.9		7.4		0.6		0.8		2.2		0.2	
C.V.	7.3		5.4		5.5									

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 or lodging, where 0 = highly resistant and 9 = highly susceptible.

Table 34. Summary of performance of entries in the Virginia Tech Wheat Test, Eastern Shore AREC, Painter, VA, 2014 harvest.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Barley Yellow Dwarf Virus (0-9)		Powdery Mildew (0-9)		Leaf Blotch (0-9)	
MAS #36					83.8	+	57.9	-	2.8	+	0.3		1.0	
USG 3523			77.8		82.4	+	58.0		1.8		0.0		1.0	
Pioneer Brand 26R10	76.1		77.8		80.3	+	58.1		2.0	+	0.5		1.8	
USG 3404			78.9		79.8	+	57.8	-	2.0	+	0.0		1.3	
Steyer Heilman			75.2		78.3	+	57.0	-	0.3		0.0		1.3	
VA11MAS-7520-2-3-255					77.4		59.2	+	0.8		0.0		1.0	
Shirley	76.5		77.4		77.2		57.8	-	0.0	-	0.0		1.0	
SS 8412	77.4		79.4	+	77.1		60.2	+	0.5		0.0		1.0	
Featherstone 73	74.3		77.7		76.9		59.8	+	1.0		0.0		1.0	
VA12FHB-34					76.7		58.8		0.5		0.0		1.3	
GA-041293-11E54					76.6		60.5	+	0.3		0.0		1.8	
VA11W-108			78.0		76.6		59.0		0.0	-	0.0		1.0	
GA-041293-11LE37					76.4		60.9	+	0.0	-	0.0		1.8	
VA11W-279					76.4		61.3	+	0.0	-	0.0		1.0	
VA08MAS-369	76.4		75.9		76.2		60.0	+	0.0	-	0.3		1.0	
AgriMAXX 434			79.0		76.1		57.2	-	1.8		0.0		1.5	
Steyer Kidwell					76.1		56.8	-	1.8		0.3		1.8	
SS 5205	76.4		78.4		75.8		59.4	+	0.5		0.0		2.3	+
SY 474			78.0		75.2		58.7		0.0	-	0.3		1.0	
GA-04434-11E44					75.0		59.5	+	0.5		0.0		2.0	
MAS #35					75.0		58.6		1.8		0.0		1.0	
Pioneer Brand 25R40			79.2		74.9		58.9		0.3		0.0		1.0	
MAS #37					74.9		58.0		1.3		0.3		1.3	
VA10W-140	73.0		81.4	+	74.8		60.0	+	0.8		0.0		1.3	
VA12W-150					74.5		59.4	+	1.0		0.0		1.5	
MAS #34					74.4		57.3	-	0.3		0.0		1.0	
VA12W-102					74.2		57.5	-	0.0	-	0.3		1.0	
VA11W-31			79.4	+	74.2		60.3	+	0.0	-	0.0		1.0	
AgriMAXX 427	73.1		73.8		74.1		56.8	-	1.0		0.0		2.0	
Pioneer Brand 26R53	62.8	-	67.7		74.0		58.9		1.8		0.8		2.3	+
MBX12-W-296			71.2		73.8		57.7	-	1.0		0.3		1.3	
USG 3251	72.6		74.1		73.6		58.7		1.3		0.0		1.0	
SS 8870					73.5		58.6		1.8		0.0		1.5	
Dyna-Gro 9223	70.3		76.6		73.2		58.2		3.3	+	0.5		1.5	
Steyer Hunker			75.9		73.1		57.2	-	2.8	+	0.0		1.8	
MBX11-V-258			76.4		73.1		58.6		1.0		0.0		1.0	
VA10W-42			74.0		73.0		58.9		2.0	+	0.0		2.0	
USG 3013			75.5		72.8		57.1	-	2.8	+	0.5		1.3	
VA12W-54					72.4		59.7	+	0.0	-	0.0		1.0	
VA11W-106			76.4		72.2		59.0		1.0		0.5		1.3	
VA11W-182					72.1		56.6	-	0.5		0.0		1.0	

Table 34. Summary of performance of entries in the Virginia Tech Wheat Test, Eastern Shore AREC, Painter, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Barley Yellow Dwarf Virus (0-9)		Powdery Mildew (0-9)		Leaf Blotch (0-9)	
Dyna-Gro 9042	68.9		72.3		71.8		57.7	-	0.5		0.3		1.0	
Pioneer Brand 26R20	72.2		75.3		71.7		59.1		0.8		0.0		1.0	
Featherstone VA258	78.9	+	75.5		71.1		58.7		1.0		0.0		1.0	
Dyna-Gro 9171	68.0		74.6		70.8		56.2	-	1.8		1.5	+	2.0	
AgriMAXX 447					70.8		57.1	-	3.5	+	0.8		2.0	
VA12W-26					70.6		59.6	+	0.3		0.5		0.8	-
USG 3993			74.7		70.5		58.5		2.0	+	0.3		1.5	
Progeny 870	68.4		71.3		70.3		57.0	-	1.8		0.8		1.8	
MAS #7					70.3		57.5	-	0.5		0.5		1.0	
AgriMAXX 413	68.8		70.9		70.1		56.4	-	0.8		1.0	+	1.3	
VA12W-72					69.9		59.2	+	0.0	-	0.0		1.0	
MD04W249-11-7			74.9		69.9		60.2	+	0.3		0.0		1.8	
MAS #6					69.9		56.3	-	1.3		0.5		1.8	
VA12FHB-37					69.8		59.1		1.0		0.0		1.0	
MAS #31					69.7		56.4	-	1.3		0.0		1.3	
Pioneer Brand 26R12	68.5		73.7		69.6		57.4	-	2.5	+	0.0		1.8	
AgriMAXX Exp 1465					69.5		57.5	-	1.3		1.5	+	2.0	
VA10W-96			77.0		69.5		61.2	+	0.0	-	0.3		1.5	
VA12FHB-85					69.5		58.9		1.0		0.0		1.0	
USG 3120	78.6	+	77.0		69.5		61.1	+	0.5		0.0		2.0	
VA12FHB-53					69.3		58.7		0.0	-	0.3		1.0	
MBX12-W-270			72.9		69.1		58.8		1.3		0.5		1.8	
MAS #32					68.9		57.4	-	1.3		0.3		1.3	
AgriMAXX Exp 1444					68.7		56.7	-	0.8		0.5		1.8	
VA10W-21	77.1		79.6	+	68.5		59.9	+	1.0		0.3		1.0	
Pioneer Brand 26R41	78.7	+	75.3		68.3		58.3		0.5		0.0		2.0	
NC09-22402			71.9		68.0		59.1		0.0	-	0.5		1.8	
USG 3201	70.7		73.3		67.8		59.8	+	2.0	+	0.3		1.8	
Pioneer Brand 25R32	68.2		66.9	-	67.5		58.9		0.8		0.5		1.0	
Progeny PGX 13-2					67.3		58.9		1.5		0.0		1.3	
MAS #33					67.2		59.7	+	2.0	+	0.3		2.0	
SS 8360					67.1		57.6	-	0.8		0.0		2.5	+
L-Brand 221					67.1		60.5	+	1.0		0.0		1.0	
Progeny 117	70.7		74.1		67.0		59.3	+	2.8	+	0.8		2.5	+
AgriMAXX 415	68.5		73.1		66.9		59.3	+	1.5		0.0		1.8	
USG 3315	---		---		66.8		59.6	+	0.5		0.3		2.0	
MD04W249-11-12					66.7		60.2	+	0.0	-	0.0		2.8	+
AgriMAXX Exp 1450					66.6		57.2	-	0.5		0.0		1.8	
USG 3612	66.9		74.4		66.5		57.3	-	1.3		0.0		2.0	
SS 8340	65.4		69.0		66.5		59.9	+	2.0	+	0.0		1.8	
Dyna-Gro 9343			72.6		66.4		58.3		1.5		0.0		2.3	+

Table 34. Summary of performance of entries in the Virginia Tech Wheat Test, Eastern Shore AREC, Painter, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Barley Yellow Dwarf Virus (0-9)		Powdery Mildew (0-9)		Leaf Blotch (0-9)	
NC08-21273			67.8		66.3		58.6		0.8		0.3		1.0	
MAS #4					66.3		59.8	+	1.8		0.0		1.8	
MAS #23					66.2		56.2	-	0.8		0.0		1.8	
VA11W-FHB60					66.1		59.0		0.0	-	0.0		3.8	+
MAS #10					65.9		58.4		4.5	+	0.0		1.0	
MAS #2					65.4		59.6	+	0.8		0.3		2.3	+
Progeny 357	64.1	-	66.7	-	65.4		55.3	-	3.0	+	0.3		1.0	
USG 3438	64.9		68.5		65.2		56.0	-	1.0		0.5		1.5	
USG 3555	72.6		70.4		65.2		58.3		0.5		0.0		1.5	
Merl	70.4		67.8		65.1		59.6	+	0.0	-	0.0		1.3	
Progeny 125	67.7		71.1		65.1		57.8	-	2.0	+	0.0		3.0	+
SS 8415	79.8	+	77.7		65.0		59.4	+	0.0	-	0.0		1.3	
VA11W-95					64.9		59.5	+	0.5		0.0		1.5	
VA11W-278			72.0		64.6		60.9	+	0.0	-	0.0		1.0	
MBX14-S-210					64.4		57.3	-	0.3		0.3		1.3	
VA11W-301			75.0		64.4		57.3	-	0.0	-	0.8		1.0	
VA11W-111					64.2		58.3		0.5		0.3		2.3	+
Yorktown	77.7		73.1		64.1		59.4	+	0.0	-	0.0		1.8	
SY 007					63.9		58.0		0.0	-	0.0		1.8	
VA10W-119	74.3		71.3		63.9		60.5	+	0.8		0.0		1.0	
VA10W-123	72.8		71.8		63.8		60.2	+	0.0	-	0.0		1.0	
Progeny 185	66.4		69.5		63.7		58.2		3.0	+	0.0		1.5	
VA11W-313					63.5		58.2		1.0		0.0		1.0	
NC-Cape Fear	75.8		73.1		62.7		60.5	+	0.3		0.3		2.0	
Progeny PGX 13-1					62.6		57.8	-	3.8	+	0.8		2.3	+
MBX14-K-297					62.5		56.4	-	2.5	+	0.5		1.8	
USG 3024			67.4	-	62.4		60.4	+	0.0	-	0.0		1.3	
SY 483			68.0		61.8		55.4	-	0.8		1.5	+	2.0	
MBX12-V-251	79.3	+	70.8		61.3	-	58.6		0.8		0.0		1.3	
VA11W-230			73.3		61.3	-	61.1	+	0.5		0.0		1.5	
USG 3833					60.1	-	57.5	-	3.5	+	0.0		1.8	
SS 520	64.1	-	64.6	-	53.9	-	58.8		0.3		1.8	+	1.8	
Massey	56.7	-	57.1	-	53.6	-	58.4		0.8		1.0	+	1.3	
Jamestown	75.8		65.1	-	52.7	-	60.7	+	0.3		0.0		1.8	
Average	71.7		73.5		69.6		58.6		1.0		0.2		1.5	
LSD (O.05)	6.8		5.8		7.9		0.7		0.8		0.7		0.6	
C.V.	11.6		7.9		7.9									

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 or lodging, where 0 = highly resistant and 9 = highly susceptible.

Table 35. Summary of performance of entries in the Virginia Tech Wheat Test, Southern Piedmont AREC, Blackstone, VA, 2014 harvest.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)		Powdery Mildew (0-9)	
VA11W-182					80.9	+	58.0	-	1.5		0.7	
SY 474			76.2		80.2	+	59.5		2.3		1.3	
AgriMAXX Exp 1450					80.1	+	58.5		1.8		1.0	
Steyer Hunker			72.0		80.0	+	58.8		2.3		3.7	+
SS 8870					79.7	+	59.9		4.0	+	1.7	
USG 3251	77.0		76.4		79.6	+	56.6	-	2.0		1.3	
SY 007					79.0		59.4		3.0		0.3	
MBX14-K-297					78.4		58.4		2.0		4.3	+
Pioneer Brand 26R41	76.8		76.6		78.0		58.8		1.3	-	1.7	
SS 8360					77.7		58.9		2.3		3.3	+
MAS #37					77.4		60.7	+	3.5	+	1.7	
Dyna-Gro 9042	72.7		71.4		77.4		58.9		1.5		1.0	
MBX11-V-258			71.4		76.6		59.2		3.0		1.0	
Progeny 870	70.3		69.4		76.5		57.7	-	2.0		2.3	
VA11W-108			74.2		76.2		59.0		1.5		0.0	-
MAS #23					75.9		57.9	-	1.5		2.7	
NC08-21273			69.3		75.8		59.9		4.0	+	1.7	
VA11W-111					75.3		59.0		2.5		0.7	
AgriMAXX 427	72.9		69.8		74.8		58.6		2.8		1.3	
VA12W-102					74.7		59.5		2.5		0.0	-
USG 3993			72.1		74.5		60.2		4.0	+	2.3	
USG 3612	79.2	+	76.5		74.5		58.3	-	2.0		1.3	
SS 5205	78.1	+	73.4		74.4		60.5	+	2.0		0.7	
Dyna-Gro 9223	71.2		71.1		74.4		58.7		2.3		3.0	+
AgriMAXX Exp 1465					74.3		58.9		1.5		2.0	
VA11W-106			72.4		74.1		59.6		2.5		1.0	
MBX12-W-270			68.0		74.0		60.1		3.8	+	1.7	
AgriMAXX 434			75.1		73.9		58.2	-	2.0		2.3	
SS 8415	72.0		77.6	+	73.9		60.3		3.8	+	0.0	-
USG 3833					73.8		58.3		1.3	-	5.3	+
VA11W-95					73.6		59.9		2.3		0.3	
Pioneer Brand 26R10	69.4		68.2		73.6		58.8		1.5		1.7	
Dyna-Gro 9171	70.0		67.5		73.5		58.0	-	1.8		2.3	
SS 8412	72.1		70.2		73.3		60.6	+	2.5		0.7	
Shirley	75.7		73.2		73.1		58.5		1.3	-	0.0	-
VA10W-21	75.8		74.6		73.1		60.2		1.8		3.0	+
MBX14-S-210					73.0		58.9		1.3	-	1.3	
Pioneer Brand 26R12	70.9		71.8		72.9		58.1	-	2.3		3.0	+

Table 35. Summary of performance of entries in the Virginia Tech Wheat Test, Southern Piedmont AREC, Blackstone, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)		Powdery Mildew (0-9)	
Dyna-Gro 9343			69.0		72.9		60.2		3.5	+	2.0	
MAS #36					72.8		59.1		4.8	+	3.3	+
MAS #34					72.1		58.6		2.0		2.0	
AgriMAXX Exp 1444					72.1		58.9		2.3		2.0	
VA12W-150					72.1		59.7		1.8		1.7	
Pioneer Brand 25R40			73.8		72.1		59.3		1.3	-	1.0	
USG 3523			77.1		71.9		58.8		2.8		2.3	
MAS #31					71.8		57.3	-	2.3		1.7	
USG 3555	74.1		69.2		71.6		59.0		2.0		0.7	
MAS #7					71.4		58.8		1.5		1.3	
VA10W-42			68.7		71.2		59.9		3.0		2.7	
MAS #35					71.2		58.3	-	2.0		4.7	+
USG 3120	74.3		66.9		71.2		61.0	+	1.5		0.7	
Progeny 357	73.2		74.2		71.2		57.5	-	2.3		2.7	
Pioneer Brand 25R32	68.5		69.1		71.0		59.3		2.5		0.7	
SS 8340	71.6		71.1		70.8		59.9		2.0		2.7	
VA10W-123	76.4		68.3		70.8		60.5	+	4.5	+	0.3	
MD04W249-11-7			66.1		70.7		60.1		2.0		0.3	
MAS #32					70.7		58.0	-	1.8		3.7	+
MAS #2					70.5		59.9		5.3	+	2.0	
AgriMAXX 413	73.2		68.4		70.4		57.6	-	1.8		3.0	+
Steyer Kidwell					70.4		57.7	-	2.3		2.7	
MAS #33					70.1		59.7		3.0		3.0	+
VA11W-279					70.0		61.0	+	2.8		0.0	-
Pioneer Brand 26R20	68.0		68.3		69.6		59.9		4.3	+	0.7	
Featherstone 73	69.6		73.4		69.6		59.8		2.5		1.0	
VA11W-230			68.6		69.5		60.9	+	1.5		0.3	
MAS #4					69.4		59.7		1.3	-	2.3	
USG 3404			74.5		69.1		59.1		2.8		1.3	
VA08MAS-369	68.4		66.9		69.1		61.0	+	1.8		0.3	
Progeny 117	72.8		68.3		69.0		60.4	+	3.8	+	2.0	
AgriMAXX 447					68.4		58.1	-	1.3	-	5.3	+
Yorktown	68.0		66.8		68.3		59.1		2.5		0.3	
VA12FHB-37					68.2		58.7		1.5		0.0	-
GA-041293-11E54					68.2		60.6	+	1.3	-	0.3	
VA12W-54					68.2		60.4		2.3		0.0	-
Progeny 185	71.1		66.9		68.1		59.1		2.3		3.7	+
VA10W-96			71.5		68.0		61.1	+	2.3		0.0	-
Featherstone VA258	75.7		73.0		67.3		59.2		2.3		1.0	
USG 3013			72.2		67.3		59.3		3.3		4.3	+
SS 520	71.6		69.1		67.3		57.4	-	2.5		1.0	

Table 35. Summary of performance of entries in the Virginia Tech Wheat Test, Southern Piedmont AREC, Blackstone, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)		Powdery Mildew (0-9)	
VA12W-26					67.2		59.7		3.5	+	0.3	
VA11W-31			69.6		67.1		60.8	+	1.8		0.3	
Progeny PGX 13-1					67.1		58.7		1.8		6.3	+
MAS #6					67.0		57.6	-	1.8		2.3	
SY 483			66.8		66.9		57.7	-	2.3		1.3	
GA-041293-11LE37					66.9		60.8	+	1.0	-	0.0	-
GA-04434-11E44					66.7		59.8		1.3	-	0.0	-
Steyer Heilman			66.5		66.4		59.5		2.8		1.3	
MBX12-W-296			69.6		66.2		59.5		2.5		1.7	
VA12FHB-85					66.2		59.3		3.3		1.7	
L-Brand 221					66.1		61.2	+	3.8	+	2.3	
USG 3315	---		---		66.0		59.8		2.3		0.3	
Jamestown	70.2		66.0		65.8		60.7	+	1.3	-	0.7	
VA10W-119	72.9		67.4		65.7		59.7		1.3	-	1.7	
VA11W-301			69.2		65.6		58.6		1.5		0.0	-
MBX12-V-251	66.6		60.6	-	65.5		60.2		3.3		0.3	
MAS #10					65.3		58.6		1.0	-	3.0	+
VA12FHB-34					65.0		60.0		3.8	+	0.3	
AgriMAXX 415	71.8		70.3		64.8		59.6		2.0		2.0	
USG 3201	70.4		68.6		64.7		59.9		1.8		2.7	
Progeny 125	70.4		63.8		64.6		58.5		2.5		3.7	+
Massey	63.6	-	63.4		64.1		59.8		4.0	+	0.7	
VA11MAS-7520-2-3-255					64.1		59.3		1.3	-	1.0	
VA11W-FHB60					63.8		59.9		2.5		0.3	
Progeny PGX 13-2					63.2		58.7		1.3	-	3.0	+
Merl	69.7		65.1		63.0		60.3		1.3	-	0.3	
NC-Cape Fear	72.0		66.6		62.7		61.6	+	3.0		0.3	
USG 3024			64.8		62.5		60.6	+	2.0		0.3	
NC09-22402			64.5		62.2		59.6		2.0		0.3	
VA11W-278			63.1		62.0		61.1	+	2.0		0.0	-
VA10W-140	67.7		65.0		60.9		60.9	+	2.3		1.7	
USG 3438	71.5		67.6		59.4	-	57.8	-	1.5		1.7	

Table 35. Summary of performance of entries in the Virginia Tech Wheat Test, Southern Piedmont AREC, Blackstone, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)		Powdery Mildew (0-9)	
MD04W249-11-12					59.3	-	59.9		1.0	-	0.0	-
Pioneer Brand 26R53	67.0		61.9	-	57.0	-	59.6		1.5		3.0	+
VA12FHB-53					56.3	-	59.3		2.5		0.0	-
VA11W-313					55.6	-	57.8	-	2.3		1.3	
VA12W-72					50.9	-	58.9		1.8		0.0	-
Average	71.8		69.7		69.9		59.3		2.3		1.6	
LSD (O.05)	6.1		7.4		9.4		1.1		1.0		1.3	
C.V.	10.4		10.5		9.2							

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 or lodging, where 0 = highly resistant and 9 = highly susceptible.

Table 36. Summary of performance of entries in the Virginia Tech Wheat Test, Northern Piedmont Center, Orange, VA, 2014 harvest.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Height (In)		Lodging (0-9)	
Pioneer Brand 26R10	91.7	+	99.5	+	105.2	+	57.8		35.3		0.0	
AgriMAXX 427	88.9	+	93.3	+	102.7	+	57.4		37.5		0.0	
AgriMAXX 434			97.4	+	97.9	+	57.9		34.8		0.0	
Progeny 125	75.1		87.3		90.3	+	57.3	-	35.5		0.0	
MAS #31					89.6	+	56.4	-	35.5		0.0	
VA11W-108			95.9	+	89.5	+	58.8		38.3	+	0.0	
SS 8360					89.2	+	58.6		34.8		0.0	
VA10W-140	85.7		90.6		87.9	+	60.0	+	36.5		0.0	
SS 5205	88.6	+	91.6		87.6	+	58.3		32.5	-	0.0	
MAS #32					87.0	+	58.4		34.3		0.0	
VA11W-106			90.8		86.7	+	58.7		35.0		0.0	
Steyer Hunker			98.1	+	86.7	+	57.4	-	38.0	+	0.0	
USG 3404			95.1	+	86.6		57.9		37.3		0.0	
AgriMAXX Exp 1465					86.5		58.5		33.5		0.0	
Pioneer Brand 26R20	87.4		88.0		86.0		58.8		36.5		0.0	
Pioneer Brand 25R40			91.6		85.2		58.0		32.5	-	0.0	
USG 3612	87.6		90.5		83.3		57.0	-	36.3		0.0	
VA11W-111					83.2		58.1		35.5		0.0	
Featherstone 73	86.0		88.9		82.4		58.2		34.5		0.0	
SS 8870					82.3		58.3		36.3		0.0	
VA12FHB-53					82.0		58.0		35.8		0.0	
MAS #23					81.8		57.3	-	34.3		0.0	
MAS #35					81.6		57.7		34.8		0.0	
VA11W-FHB60					81.6		58.3		36.3		0.0	
MAS #36					81.4		58.3		36.8		0.0	
USG 3833					81.3		57.9		37.8		0.0	
VA11W-301			83.9		81.3		57.4	-	33.3	-	0.0	
AgriMAXX Exp 1444					81.1		57.5		36.8		1.3	+
Progeny PGX 13-2					81.0		58.1		32.5	-	0.0	
VA11W-278			82.6		80.6		60.3	+	35.3		0.0	
Dyna-Gro 9223	86.0		88.3		80.5		57.4	-	38.8	+	0.8	+
Steyer Kidwell					79.6		56.4	-	33.8		0.0	
MAS #37					79.3		59.1		33.8		0.0	
Pioneer Brand 26R12	77.9		86.1		78.1		57.5		36.8		0.0	
VA11W-182					78.0		56.2	-	32.0	-	0.0	
USG 3013			92.2		77.8		57.6		38.5	+	0.0	
VA10W-42			89.2		77.4		58.7		37.8		0.0	
MAS #6					77.0		56.9	-	34.0		0.0	
VA11MAS-7520-2-3-255					76.7		58.8		33.0	-	0.0	

Table 36. Summary of performance of entries in the Virginia Tech Wheat Test, Northern Piedmont Center, Orange, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Height (In)		Lodging (0-9)	
VA12W-72					76.7		58.8		35.5		0.0	
AgriMAXX 413	83.6		87.3		76.4		56.5	-	34.5		0.0	
MBX14-K-297					76.1		57.1	-	37.3		0.0	
Pioneer Brand 26R53	81.3		81.3		76.0		58.6		33.8		0.0	
SS 8340	84.9		87.7		75.8		59.7	+	35.0		0.0	
Pioneer Brand 26R41	85.8		87.9		75.6		58.8		34.3		0.0	
USG 3201	80.8		84.6		75.6		59.5	+	35.8		0.0	
USG 3555	84.4		82.8		75.6		58.1		33.5		0.0	
MAS #34					75.4		57.8		33.8		0.0	
VA10W-123	84.4		85.5		75.3		58.6		37.0		0.0	
USG 3315	---		---		75.3		58.7		37.0		0.0	
SS 520	79.8		82.8		74.6		57.2	-	36.0		0.0	
Dyna-Gro 9042	79.7		83.4		74.4		57.7		33.0	-	0.0	
USG 3993			81.0		74.3		58.7		36.5		0.0	
USG 3523			93.9	+	73.8		57.8		35.0		0.0	
MAS #2					73.7		59.1		38.3	+	0.5	+
Featherstone VA258	84.6		84.4		73.6		58.3		37.5		0.0	
NC08-21273			81.6		73.2		60.1	+	34.5		0.0	
Merl	83.0		83.0		73.2		59.9	+	34.0		0.0	
VA11W-95					73.1		58.5		38.3	+	0.0	
VA12FHB-85					73.1		58.1		35.8		0.0	
AgriMAXX Exp 1450					73.0		57.5		36.3		0.0	
MAS #4					73.0		59.4	+	36.5		0.0	
MAS #7					72.5		57.6		34.3		0.0	
MBX11-V-258			87.2		72.4		57.8		37.0		0.0	
Pioneer Brand 25R32	81.9		85.0		72.0		57.7		35.8		0.0	
MBX14-S-210					71.0		57.9		37.3		0.0	
MBX12-W-270			81.0		71.0		58.3		37.3		0.0	
Progeny 870	83.8		86.7		71.0		56.0	-	33.5		0.0	
Progeny PGX 13-1					70.8		58.0		38.3	+	0.0	
MAS #33					70.2		58.6		37.5		0.8	+
NC09-22402			76.3		70.1		58.7		35.3		0.0	
USG 3438	81.4		81.6		70.0		56.1	-	34.0		0.0	
Progeny 357	88.5		91.3		69.7		56.3	-	35.0		0.0	
SY 483			74.3	-	69.6		56.9	-	37.3		0.0	
MBX12-W-296			76.3		69.6		57.1	-	40.0	+	0.0	
SY 474			82.8		68.9		59.3		38.8	+	0.0	
Jamestown	79.1		77.0		68.3		61.3	+	35.0		0.0	
GA-041293-11E54					68.2		60.2	+	37.0		0.0	

Table 36. Summary of performance of entries in the Virginia Tech Wheat Test, Northern Piedmont Center, Orange, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Height (In)		Lodging (0-9)	
VA12W-150					67.6		58.1		33.5		0.0	
USG 3024			79.4		67.4		59.4	+	32.8	-	0.0	
Dyna-Gro 9171	83.0		85.3		67.4		56.0	-	33.5		0.0	
USG 3251	86.9		90.3		67.3		57.9		37.8		0.0	
Shirley	80.7		80.8		67.1		57.2	-	33.0	-	0.0	
AgriMAXX 447					66.9		58.0		37.3		0.0	
SS 8412	76.4		78.2		66.7		60.3	+	33.0	-	0.0	
VA08MAS-369	75.7		75.7		66.5		60.1	+	35.0		0.0	
MBX12-V-251	78.4		79.1		66.5		57.6		33.5		0.0	
MD04W249-11-12					66.5		59.7	+	37.3		0.0	
Progeny 185	82.9		82.6		66.4		58.5		39.5	+	0.5	+
USG 3120	81.4		81.1		66.2		59.8	+	36.5		0.0	
VA12W-102					65.9		57.3	-	31.8	-	0.0	
VA10W-21	87.6		90.7		65.9		59.8	+	35.5		0.0	
VA10W-119	72.9	-	74.9	-	65.8		60.0	+	37.3		0.0	
Steyer Heilman			76.4		65.6		57.6		39.8	+	0.0	
GA-04434-11E44					65.5		58.6		34.0		0.0	
Yorktown	80.1		83.2		65.5		58.9		36.0		0.0	
MAS #10					64.9		58.2		31.8	-	0.0	
Dyna-Gro 9343			76.4		63.8		58.2		37.0		0.0	
VA12W-54					63.2		58.6		33.3	-	0.0	
AgriMAXX 415	77.4		77.3		62.6		59.4	+	35.8		0.0	
VA12FHB-37					62.5		58.6		34.5		0.0	
GA-041293-11LE37					62.1		60.2	+	35.3		0.0	
VA11W-279					61.9		60.1	+	33.8		0.0	
MD04W249-11-7			75.8		61.8		59.7	+	37.3		0.0	
VA11W-313					61.7		56.8	-	34.3		0.0	
Progeny 117	76.8		72.6	-	60.9		57.4		36.3		0.0	
L-Brand 221					60.6		60.7	+	38.3	+	0.0	
NC-Cape Fear	75.2		76.1		59.9	-	59.5	+	35.3		0.0	
SY 007					59.6	-	57.4	-	36.5		0.0	
VA11W-230			75.9		59.5	-	60.0	+	34.0		0.0	
VA12W-26					57.9	-	58.8		31.0	-	0.0	
VA10W-96			78.4		57.9	-	60.0	+	36.8		0.0	
SS 8415	72.9	-	71.2	-	57.4	-	58.7		37.0		0.0	

Table 36. Summary of performance of entries in the Virginia Tech Wheat Test, Northern Piedmont Center, Orange, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Height (In)		Lodging (0-9)	
VA11W-31			80.2		56.5	-	59.2		34.8		0.0	
Massey	64.1	-	64.8	-	55.8	-	59.2		40.8	+	0.5	+
VA12FHB-34					54.1	-	58.9		38.3	+	0.0	
Average	81.8		84.0		73.6		58.3		35.6		0.0	
LSD (O.05)	6.8		8.6		13.1		0.9		2.2		0.5	
C.V.	10.1		10.0		11.0							

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.

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

Table 37. Summary of performance of entries in the Virginia Tech Wheat Test, Kentland farm, Blacksburg, VA, 2014 harvest.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Stripe Rust Severity (%)		Stripe Rust Reaction (0-9)	
Pioneer Brand 26R20	90.5		98.3		117.9	+	60.6	+	134.0	+	32.5		0.0		3.3		1.3		30.0		1.5	
Pioneer Brand 25R40			110.2	+	114.6	+	59.4	-	134.0	+	30.0		0.0		4.8	+	0.5		1.0	-	0.0	
Pioneer Brand 26R41	93.0	+	104.0	+	113.3	+	60.0		134.3	+	29.5	-	0.0		1.8		1.3		1.0	-	0.0	
AgriMAXX Exp 1465					113.1	+	59.7		134.0	+	31.3		0.0		3.3		2.0	+	20.0		1.5	
USG 3438	95.1	+	107.7	+	112.2	+	57.8	-	133.0		29.3	-	0.0		3.3		0.8		1.0	-	0.0	
Progeny 870	89.1		99.7		111.8	+	58.0	-	133.0		29.0	-	0.0		2.5		1.3		1.0	-	0.0	
AgriMAXX 447					111.7	+	59.3	-	134.5	+	33.8	+	0.0		1.5		3.0	+	1.0	-	0.0	
USG 3251	91.6		99.1		110.9	+	59.4	-	134.0	+	32.8	+	0.0		4.5	+	1.3		15.0		0.0	
Pioneer Brand 25R32	89.5		96.9		110.6		60.4	+	134.0	+	32.5		0.3		3.8		1.3		55.0	+	9.0	+
Steyer Kidwell					110.5		58.1	-	132.8		29.8		0.0		3.0		1.0		3.0	-	0.0	
AgriMAXX Exp 1444					110.4		58.3	-	134.3	+	32.3		0.0		2.8		1.8		1.0	-	0.0	
Pioneer Brand 26R53	90.9		101.3		109.6		60.5	+	133.8		29.8		0.0		1.5		1.0		5.5		0.0	
SS 8415	87.0		93.0		109.1		60.2		133.3		32.3		0.8		3.3		0.5		1.0	-	0.0	
Shirley	92.9	+	97.0		109.0		58.6	-	134.0	+	30.5		0.0		1.5		0.3		57.5	+	9.0	+
VA10W-140	84.9		95.3		108.7		62.0	+	133.5		32.5		0.3		1.3		1.3		80.0	+	9.0	+
MBX14-S-210					107.8		59.9		133.8		31.5		0.0		2.0		0.8		30.0		0.0	
VA11W-108			104.3	+	107.4		60.4	+	132.8		33.0	+	0.0		1.3		1.0		1.0	-	0.0	
SS 8360					107.2		59.4	-	134.3	+	30.0		0.0		2.3		1.3		22.5		1.5	
Dyna-Gro 9171	85.8		95.8		107.0		58.5	-	133.0		28.5	-	0.0		2.5		1.3		1.0	-	0.0	
Steyer Heilman			102.5	+	106.8		59.8		133.0		36.0	+	0.3		4.5	+	0.5		52.5	+	6.0	+
MBX12-W-270			93.8		106.8		60.4	+	134.0	+	33.5	+	0.8		1.8		1.0		1.0	-	0.0	
Pioneer Brand 26R10	92.2	+	106.5	+	106.7		58.7	-	134.0	+	30.5		0.0		6.0	+	1.3		1.0	-	0.0	
MAS #6					106.5		57.9	-	132.3	-	29.0	-	0.0		3.5		1.5		3.0	-	0.0	
NC09-22402			87.9		106.4		60.5	+	134.3	+	32.3		0.8		2.0		0.8		1.0	-	0.0	
USG 3404			100.3		106.3		58.3	-	134.8	+	30.5		0.0		2.0		1.3		1.0	-	0.0	
USG 3013			93.4		105.8		57.9	-	134.0	+	32.8	+	0.5		4.8	+	1.0		3.0	-	0.0	
USG 3612	---		---		105.7		58.3	-	133.0		31.3		0.3		4.3	+	0.3		10.0		4.5	
VA10W-119	83.9		96.3		105.5		61.2	+	132.0	-	31.8		0.0		2.0		0.8		42.5	+	6.0	+

Table 37. Summary of performance of entries in the Virginia Tech Wheat Test, Kentland farm, Blacksburg, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Stripe Rust Severity (%)		Stripe Rust Reaction (0-9)	
AgriMAXX 434			97.9		105.4		58.3	-	133.3		29.8		0.0		4.0	+	1.3		57.5	+	6.0	+
SS 8870					105.3		60.3		133.8		33.3	+	0.3		1.5		1.3		1.0	-	0.0	
USG 3201	87.4		95.9		105.1		61.2	+	133.0		31.3		0.0		1.8		1.5		1.0	-	0.0	
Progeny PGX 13-2					105.1		60.0		133.3		27.5	-	0.0		2.5		0.8		7.5		0.0	
Dyna-Gro 9343			91.7		104.5		60.6	+	134.3	+	32.3		0.8		2.3		0.8		3.0	-	0.0	
SS 520	86.1		91.3		104.4		59.5		131.8	-	32.8	+	0.5		3.8		0.5		75.0	+	6.0	+
AgriMAXX 413	87.4		96.7		104.4		57.7	-	133.0		29.0	-	0.0		3.3		1.0		1.0	-	0.0	
MAS #23					104.2		57.9	-	133.3		29.5	-	0.0		5.8	+	1.0		42.5	+	9.0	+
SY 474			102.9	+	104.2		60.0		134.3	+	33.8	+	0.0		2.8		0.5		1.0	-	0.0	
Dyna-Gro 9223	74.0	-	88.1		104.1		57.9	-	134.5	+	33.5	+	0.3		2.8		1.5		7.5		0.0	
MAS #31					104.0		57.2	-	133.3		31.8		0.0		7.0	+	0.5		5.5		0.0	
USG 3315	---		---		103.8		60.4	+	134.0	+	31.8		0.3		1.5		0.3		40.0	+	3.0	
VA11W-182					103.8		57.7	-	133.3		25.8	-	0.0		1.8		0.3		50.0	+	9.0	+
AgriMAXX 427	82.7		93.7		103.7		58.3	-	133.0		32.0		1.0		3.3		0.5		10.0		1.5	
USG 3833					103.7		59.3	-	134.8	+	32.5		0.0		1.3		3.3	+	1.0	-	0.0	
Merl	83.6		89.8		103.6		61.4	+	133.8		30.5		0.0		2.3		1.3		3.0	-	0.0	
MAS #2					103.6		61.4	+	134.3	+	35.8	+	3.8	+	1.8		0.8		30.0		4.5	
VA11MAS-7520-2-3-255					103.6		60.0		133.8		29.0	-	0.0		1.3		0.8		25.0		4.5	
VA11W-301			98.5		103.3		58.4	-	133.8		29.8		0.0		1.5		0.5		70.0	+	7.5	+
USG 3523			94.9		103.2		58.6	-	134.0	+	30.0		0.0		3.3		0.5		10.5		0.0	
AgriMAXX 415	88.3		100.1		103.1		61.2	+	133.3		32.0		0.0		2.0		1.3		3.0	-	0.0	
MAS #33					103.1		60.5	+	132.0	-	31.3		0.0		1.8		1.3		30.0		1.5	
VA08MAS-369	85.1		94.3		103.0		62.0	+	133.5		29.3	-	0.0		1.5		0.5		22.5		1.5	
VA11W-95					102.8		60.5	+	132.3	-	32.8	+	0.0		1.5		0.8		3.0	-	0.0	
MD04W249-11-7			88.0		102.7		62.1	+	132.5	-	32.8	+	0.3		3.3		1.0		57.5	+	6.0	+
USG 3993			88.6		102.3		60.2		134.3	+	32.5		0.3		1.5		1.5		1.0	-	0.0	
MAS #10					102.2		59.3	-	134.5	+	29.5	-	0.0		1.3		1.3		3.0	-	4.5	
VA10W-123	89.5		91.5		102.2		59.5		131.8	-	32.5		2.8	+	4.3	+	0.5		1.0	-	0.0	

Table 37. Summary of performance of entries in the Virginia Tech Wheat Test, Kentland farm, Blacksburg, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Stripe Rust Severity (%)		Stripe Rust Reaction (0-9)	
MAS #35					102.2		58.8	-	133.8		28.8	-	0.0		1.5		1.3		37.5	+	7.5	+
MAS #34					102.1		59.7		134.0	+	28.5	-	0.0		1.5		0.8		55.0	+	9.0	+
SS 8412	89.4		93.3		102.1		61.8	+	133.5		30.8		0.0		1.8		0.5		25.0		3.0	
MBX11-V-258			93.6		101.9		59.8		134.0	+	33.3	+	0.5		1.8		0.8		65.0	+	9.0	+
AgriMAXX Exp 1450					101.8		59.8		133.3		32.8	+	0.0		1.0		0.8		27.5		3.0	
Pioneer Brand 26R12	75.8	-	91.0		101.6		59.1	-	133.8		33.5	+	0.3		4.3	+	1.0		7.5		0.0	
MAS #4					101.5		61.3	+	133.0		30.0		0.0		1.8		1.5		1.0	-	0.0	
MBX14-K-297					101.0		58.0	-	134.0	+	33.3	+	0.3		5.8	+	1.8		5.5		0.0	
MAS #32					100.9		60.1		133.5		29.0	-	0.0		3.5		0.5		37.5	+	7.5	+
SS 8340	89.5		100.2		100.8		61.3	+	133.0		30.8		0.0		2.3		0.8		1.0	-	0.0	
VA12W-72					100.7		59.9		132.0	-	30.0		0.0		3.3		0.3		1.0	-	0.0	
MBX12-W-296			97.7		100.6		59.7		133.3		36.0	+	0.5		4.3	+	0.8		45.0	+	6.0	+
MAS #37					100.6		60.3		132.5	-	30.3		2.5	+	4.5	+	0.0		40.0	+	6.0	+
VA11W-313					100.5		58.6	-	130.3	-	28.3	-	0.0		2.0		0.8		1.0	-	0.0	
GA-041293-11E54					99.8		61.9	+	133.0		30.5		0.0		1.3		0.3		1.0	-	0.0	
MD04W249-11-12					99.7		62.1	+	132.3	-	32.0		0.0		2.5		0.3		5.5		0.0	
Progeny PGX 13-1					99.6		59.4	-	134.8	+	33.0	+	0.3		1.0		1.8		3.0	-	0.0	
VA11W-31			96.0		99.5		60.8	+	132.0	-	30.8		0.0		1.5		0.0		1.0	-	0.0	
Progeny 117	85.2		91.2		99.3		60.8	+	131.0	-	32.3		1.8	+	3.3		1.0		17.5		0.0	
MBX12-V-251	84.2		89.0		98.7		60.2		133.3		30.8		0.0		1.8		0.3		47.5	+	9.0	+
VA10W-96			90.4		98.5		62.7	+	130.8	-	31.8		0.0		1.0		0.0		1.0	-	0.0	
Progeny 357	80.5		87.0		98.3		55.7	-	135.0	+	31.8		0.0		6.8	+	3.3	+	30.0		3.0	
USG 3024			83.5		97.9		61.6	+	133.0		30.5		0.0		1.0		0.0		1.0	-	0.0	
VA11W-278			90.3		97.8		61.6	+	130.8	-	30.5		0.0		1.0		0.3		1.0	-	0.0	
VA11W-106			92.8		97.7		60.1		133.5		30.3		0.0		1.3		0.5		5.5		0.0	
Steyer Hunker			91.6		97.5		58.0	-	134.0	+	33.5	+	2.3	+	4.8	+	1.3		1.0	-	0.0	
VA11W-230			90.9		97.4		62.8	+	131.3	-	29.3	-	0.0		1.3		0.3		1.0	-	0.0	
Progeny 185	88.0		96.1		97.0		59.5		132.0	-	34.0	+	0.5		3.5		1.0		55.0	+	6.0	+

Table 37. Summary of performance of entries in the Virginia Tech Wheat Test, Kentland farm, Blacksburg, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Stripe Rust Severity (%)		Stripe Rust Reaction (0-9)	
VA12FHB-85					96.8		60.6	+	134.0	+	33.5	+	0.0		2.3		0.3		57.5	+	9.0	+
GA-04434-11E44					96.5		60.7	+	134.0	+	28.8	-	0.0		1.8		0.8		1.0	-	0.0	
Jamestown	76.8	-	82.6	-	96.4		62.6	+	130.5	-	28.8	-	0.0		2.0		0.0		5.5		0.0	
GA-041293-11LE37					96.0		62.1	+	132.5	-	29.8		0.0		1.5		0.3		1.0	-	0.0	
Progeny 125	87.1		95.1		95.9		60.0		131.3	-	29.5	-	0.5		4.3	+	2.3	+	3.0	-	0.0	
SY 007					95.9		59.7		131.8	-	31.0		0.0		2.5		0.8		1.0	-	0.0	
VA11W-111					95.9		59.1	-	132.5	-	30.0		0.0		1.0		1.0		3.0	-	0.0	
VA12W-150					95.9		61.0	+	132.3	-	31.3		0.5		1.5		0.5		1.0	-	0.0	
NC08-21273			81.4	-	95.8		60.6	+	133.3		30.3		0.8		4.3	+	1.0		85.0	+	9.0	+
Featherstone VA258	82.8		85.9		95.5		59.7		133.8		34.0	+	1.8	+	2.3		0.0		70.0	+	9.0	+
MAS #7					95.3		58.9	-	134.5	+	29.8		0.0		3.8		0.5		1.0	-	0.0	
VA12FHB-37					95.1		59.9		134.0	+	31.3		0.0		2.0		0.8		50.0	+	6.0	+
SY 483			82.6	-	95.1		59.6		135.8	+	33.3	+	0.0		2.5		0.3		1.0	-	0.0	
USG 3555	84.1		84.4		95.1		59.2	-	132.3	-	27.8	-	0.0		2.5		0.3		1.0	-	0.0	
VA12FHB-34					95.0		60.7	+	132.0	-	32.8	+	0.0		1.8		0.5		5.5		0.0	
VA12W-54					94.5		60.7	+	130.0	-	28.5	-	0.0		1.5		0.3		1.0	-	0.0	
Dyna-Gro 9042	84.3		92.5		94.5		58.7	-	134.5	+	30.0		0.0		3.0		1.0		1.0	-	0.0	
MAS #36					94.0		60.3		135.5	+	32.3		0.3		1.8		1.5		35.0	+	6.0	+
VA10W-21	87.0		89.6		93.9		62.1	+	133.3		29.5	-	0.0		2.0		0.3		70.0	+	6.0	+
SS 5205	80.7		85.1		93.6		60.8	+	132.5	-	26.5	-	0.3		1.5		0.5		1.0	-	0.0	
USG 3120	79.5		88.5		92.9		61.8	+	131.3	-	31.0		0.0		2.0		0.5		22.5		1.5	
Yorktown	84.2		84.4		92.5		60.4	+	133.5		31.0		1.8	+	1.5		0.3		3.0	-	0.0	
VA10W-42			85.2		92.3		60.0		131.8	-	32.5		0.0		1.5		2.0	+	25.0		1.5	
VA11W-FHB60					92.1		59.9		131.5	-	30.5		0.0		1.5		0.5		22.5		3.0	
VA12FHB-53					91.8		60.0		133.0		30.5		0.3		1.0		0.0		22.5		6.0	+
VA11W-279					91.7	-	61.3	+	132.3	-	27.3	-	0.0		1.3		0.3		1.0	-	0.0	
Featherstone 73	83.4		83.5	-	91.0	-	60.7	+	134.8	+	31.8		2.0	+	0.8	-	0.0		1.0	-	0.0	

Table 37. Summary of performance of entries in the Virginia Tech Wheat Test, Kentland farm, Blacksburg, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)		Date Headed (Julian)		Height (In)		Lodging (0-9)		Leaf Rust (0-9)		Powdery Mildew (0-9)		Stripe Rust Severity (%)		Stripe Rust Reaction (0-9)	
L-Brand 221					90.9	-	61.9	+	132.5	-	32.3		1.0		1.3		0.3		67.5	+	9.0	+
VA12W-102					90.6	-	58.9	-	134.3	+	28.5	-	0.0		1.8		1.0		8.0		1.5	
NC-Cape Fear	77.9	-	82.3	-	90.0	-	62.2	+	131.0	-	30.3		1.8	+	2.3		0.5		65.0	+	6.0	+
VA12W-26					87.6	-	60.3		133.3		27.3	-	0.3		2.5		1.0		15.0		6.0	+
Massey	54.7	-	64.1	-	81.0	-	60.6	+	133.5		34.8	+	1.5	+	5.5	+	0.5		60.0	+	7.5	+
Average	85.0		93.0		101.3		59.9		133.2		31.1		0.3		2.5		0.8		19.3		2.3	
LSD (O.05)	6.7		9.5		9.5		0.5		0.7		1.6		1.1		1.7		1.1		14.5		2.7	
C.V.	9.6		10.0		6.3																	

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 or lodging, where 0 = highly resistant and 9 = highly susceptible.

Table 38. Summary of performance of entries in the Virginia Tech Wheat Test, planted No-Till at Tidewater AREC, Holland, VA, 2014 harvest.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)	
SS 8360					69.3	+	58.6	
MAS #37					69.1	+	59.4	+
AgriMAXX Exp 1444					66.2	+	58.1	-
VA11W-279					63.9	+	60.8	+
USG 3404			62.7	+	63.1	+	58.2	-
SS 8412	67.5		62.1	+	62.1		60.3	+
AgriMAXX 413	66.3		61.4	+	61.4		56.6	-
MAS #35					60.6		57.6	-
VA11W-301			51.8		60.6		57.6	-
Shirley	66.1		60.6	+	60.6		57.7	-
USG 3612	68.2	+	60.4	+	60.4		58.0	-
USG 3523			59.2		59.5		58.3	-
SS 8340	58.0		59.5		59.5		59.8	+
MAS #23					59.2		57.5	-
Steyer Heilman			45.3		59.1		58.2	-
SY 474			52.6		58.9		59.4	+
USG 3251	65.4		58.5		58.5		59.2	
VA11MAS-7520-2-3-255					58.3		58.6	
VA11W-106			56.5		58.1		59.4	+
Progeny 185	63.4		57.9		57.9		59.1	
Pioneer Brand 26R10	63.1		57.7		57.7		58.9	
SY 483			55.1		57.6		58.7	
MAS #36					57.3		58.9	
VA12FHB-53					57.0		58.5	
USG 3315	---		---		56.8		60.0	+
MAS #34					56.7		57.5	-
Dyna-Gro 9042	64.8		56.4		56.4		58.5	
MAS #7					56.3		58.6	
NC-Cape Fear	62.9		56.2		56.2		61.0	+
Progeny 125	59.9		56.2		56.2		57.0	-
Pioneer Brand 25R32	61.9		56.2		56.2		59.2	
AgriMAXX 434			51.8		56.1		57.8	-
Featherstone 73	64.3		55.8		55.8		59.5	+
USG 3833					55.6		58.2	-
Progeny PGX 13-2					55.0		58.6	
Pioneer Brand 25R40			55.3		54.9		59.4	+
VA11W-313					54.8		56.8	-
VA12W-26					54.7		59.0	
AgriMAXX Exp 1465					54.6		58.4	-

Table 38. Summary of performance of entries in the Virginia Tech Wheat Test, planted No-Till at Tidewater AREC, Holland, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)	
Pioneer Brand 26R41	62.1		54.5		54.5		58.8	
Pioneer Brand 26R20	60.9		54.2		54.2		59.9	+
VA12W-102					54.2		58.2	-
MBX11-V-258			42.3	-	54.2		59.0	
MBX12-V-251	56.0		47.0		53.8		57.8	-
VA11W-182					53.7		56.7	-
Dyna-Gro 9223	62.9		53.6		53.6		58.8	
MBX14-K-297					53.4		58.4	-
VA11W-95					53.4		59.4	+
MAS #10					53.2		58.7	
AgriMAXX 427	68.3	+	53.2		53.2		58.3	-
L-Brand 221					53.2		61.5	+
SS 8415	61.4		53.1		53.1		58.8	
VA10W-96			51.9		53.0		60.4	+
Pioneer Brand 26R53	59.5		52.7		52.7		59.1	
MAS #33					52.7		59.1	
USG 3438	56.9		52.6		52.6		56.6	-
MBX12-W-296			40.2	-	52.6		58.3	-
VA10W-140	66.2		52.5		52.5		60.7	+
SY 007					52.5		58.5	
USG 3013			49.8		52.5		58.6	
Progeny 357	60.1		52.4		52.4		57.0	-
VA12FHB-85					52.0		59.9	+
VA08MAS-369	59.3		51.8		51.8		61.0	+
Featherstone VA258	57.0		51.8		51.8		58.5	
AgriMAXX 447					51.7		58.6	
VA10W-123	60.5		51.6		51.6		59.1	
NC09-22402			50.8		51.4		58.7	
SS 5205	63.0		51.4		51.4		58.7	
MBX12-W-270			45.6		51.2		60.0	+
VA12W-54					51.0		60.0	+
Progeny 870	55.7		51.0		51.0		56.3	-
USG 3201	58.7		51.0		51.0		60.0	+
MAS #31					50.8		56.9	-
NC08-21273			45.9		50.7		60.1	+
Yorktown	59.2		50.6		50.6		58.7	
VA11W-111					50.2		58.6	
VA10W-42			45.6		50.2		58.6	
VA12FHB-37					50.1		58.4	-
MAS #32					50.0		58.8	

Table 38. Summary of performance of entries in the Virginia Tech Wheat Test, planted No-Till at Tidewater AREC, Holland, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)	
VA11W-108			53.7		49.9		59.3	
VA12W-150					49.7		60.1	+
VA11W-278			47.7		49.5		60.3	+
VA11W-31			48.7		49.3		58.8	
USG 3555	60.6		49.3		49.3		58.4	-
Dyna-Gro 9171	55.1		49.1		49.1		56.5	-
GA-041293-11E54					49.0		60.5	+
Merl	61.3		48.9		48.9		60.3	+
MAS #6					48.7		56.4	-
VA12W-72					48.5		58.2	-
Progeny 117	58.6		48.4		48.4		58.6	
AgriMAXX 415	56.5		48.1		48.1		59.7	+
SS 8870					48.1		59.5	+
VA10W-21	62.1		48.0		48.0		60.2	+
MAS #2					48.0		60.8	+
USG 3024			48.5		48.0		59.8	+
GA-04434-11E44					48.0		59.8	+
Steyer Hunker			47.3		47.6		58.6	
MBX14-S-210					47.4		57.5	-
MD04W249-11-7			48.6		47.3		60.0	+
MD04W249-11-12					47.2		59.9	+
MAS #4					47.0		59.9	+
AgriMAXX Exp 1450					46.7		57.8	-
VA12FHB-34					46.6		59.1	
VA11W-230			49.2		46.5		60.5	+
USG 3120	59.0		46.4		46.4		59.3	+
Massey	54.7		46.0		46.0		59.7	+
USG 3993			38.8	-	45.9		59.7	+
Dyna-Gro 9343			42.1	-	45.6		59.1	
VA10W-119	59.8		45.6		45.6		59.8	+
SS 520	60.7		45.6		45.6		58.2	-
Pioneer Brand 26R12	54.5		45.2		45.2		57.5	-
VA11W-FHB60					44.5		58.1	-
Steyer Kidwell					44.2		56.5	-

Table 38. Summary of performance of entries in the Virginia Tech Wheat Test, planted No-Till at Tidewater AREC, Holland, VA, 2014 harvest, cont'd.

Line	3-year Av. Yield (Bu/a)		2-year Av. Yield (Bu/a)		Yield (Bu/a)		Test Weight (Lb/bu)	
Progeny PGX 13-1					41.6	-	58.4	
Jamestown	56.9		41.4	-	41.4	-	60.4	+
GA-041293-11LE37					39.9	-	60.3	+
Average	60.9		51.4		52.7		58.8	
LSD (O.05)	6.7		8.8		9.3		0.5	
C.V.	10.9		13.1		12.1			

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 or lodging, where 0 = highly resistant and 9 = highly susceptible.

Table 39. Summary of performance of entries in the Virginia Tech Wheat Test at Shenandoah Valley in Rockingham County, VA, 2014 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)	
Pioneer Brand 26R12	99.4	+	55.3	-	4.8	+
Featherstone VA258	95.7	+	57.3		1.3	-
Shirley	89.7		56.7		2.3	
MAS #37	88.0		56.2	-	4.5	
Featherstone 73	87.8		58.0	+	3.3	
SS 8412	87.1		58.2	+	3.0	
MBX14-S-210	87.1		56.9		2.5	
MAS #10	86.9		57.0		1.0	-
SS 8360	86.9		57.2		2.8	
MBX11-V-258	86.8		56.9		2.8	
MAS #31	86.8		55.1	-	3.0	
VA11W-279	86.7		58.5	+	3.5	
VA12W-72	86.6		56.2	-	2.5	
VA11W-108	86.0		56.7		2.3	
MBX14-K-297	86.0		56.4		4.5	
USG 3120	85.9		57.6		3.0	
MAS #23	85.9		55.6	-	2.5	
VA11W-230	85.8		58.5	+	4.0	
VA11W-182	85.4		55.2	-	3.3	
Pioneer Brand 26R10	85.2		55.9	-	3.3	
VA10W-119	84.7		58.8	+	3.8	
USG 3404	84.5		56.7		1.8	-
VA11W-313	84.4		56.2	-	2.8	
AgriMAXX 447	84.0		57.1		1.8	-
Pioneer Brand 26R53	84.0		58.6	+	2.3	
VA10W-96	83.9		59.3	+	4.3	
Progeny 870	83.5		55.5	-	3.5	
VA12W-54	83.2		54.7	-	3.8	
MAS #6	83.1		54.8	-	3.0	
Pioneer Brand 26R41	82.8		56.6		1.8	-
Dyna-Gro 9343	82.7		57.7		3.8	
AgriMAXX Exp 1450	82.5		57.4		1.8	-
SY 483	82.1		57.0		3.5	
Progeny 125	82.1		56.3		2.3	
Progeny 357	82.1		54.4	-	2.8	
Steyer Hunker	81.8		56.5		4.3	
MAS #4	81.7		58.8	+	2.5	
SS 520	81.5		55.3	-	4.8	+
GA-041293-11E54	81.1		59.1	+	2.0	-
VA10W-140	80.5		58.3	+	4.0	
MD04W249-11-12	80.0		58.4	+	3.5	

Table 39. Summary of performance of entries in the Virginia Tech Wheat Test at Shenandoah Valley in Rockingham County, VA, 2014 harvest, cont'd.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)	
GA-041293-11LE37	80.0		59.2	+	2.5	
USG 3013	79.9		56.5		4.3	
MAS #35	79.7		56.3		2.3	
Jamestown	79.4		58.0	+	4.5	
VA10W-123	79.4		58.0	+	3.5	
Pioneer Brand 25R40	79.1		57.3		2.8	
VA11W-111	79.1		55.8	-	1.3	-
SS 8870	78.9		57.7		3.5	
NC-Cape Fear	78.8		58.7	+	5.0	+
VA11W-301	78.8		57.5		1.8	-
VA11W-106	78.5		56.8		3.5	
VA11W-278	78.4		58.5	+	2.5	
Massey	78.4		59.0	+	3.3	
USG 3833	78.2		56.4		2.3	
MBX12-W-296	78.1		56.9		3.5	
Dyna-Gro 9171	78.1		55.4	-	3.8	
GA-04434-11E44	78.0		57.2		4.0	
USG 3024	77.6		58.3	+	1.8	-
USG 3438	77.5		55.3	-	2.8	
AgriMAXX Exp 1444	77.5		56.9		2.5	
USG 3201	77.4		58.6	+	2.3	
SY 474	77.2		58.4	+	2.8	
MAS #34	77.1		55.9	-	4.0	
Progeny 185	77.1		58.5	+	3.0	
AgriMAXX 434	76.9		55.9	-	3.0	
VA12FHB-34	76.9		57.4		3.3	
Yorktown	76.7		57.5		6.3	+
VA10W-21	76.7		58.1	+	3.3	
SS 8415	76.5		57.4		3.8	
MAS #33	76.2		57.9		2.5	
VA12W-26	76.1		57.6		3.3	
AgriMAXX 415	76.1		58.7	+	2.3	
NC08-21273	76.0		57.9		3.8	
USG 3251	75.7		56.6		3.0	
MBX12-V-251	75.7		56.4		3.3	
SY 007	75.4		56.4		2.5	
USG 3523	75.2		55.8	-	2.3	
AgriMAXX 413	75.2		55.7	-	2.0	-
USG 3315	74.6		56.7		3.8	
SS 8340	74.6		58.4	+	2.3	
VA12FHB-37	74.3		56.8		2.5	

Table 39. Summary of performance of entries in the Virginia Tech Wheat Test at Shenandoah Valley in Rockingham County, VA, 2014 harvest, cont'd.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)	
VA12FHB-85	74.3		58.6	+	2.3	
MAS #2	74.1		58.5	+	3.7	
VA12W-150	74.0		57.5		5.3	+
Progeny PGX 13-2	73.8		56.4		2.8	
MD04W249-11-7	73.6		58.5	+	4.3	
Dyna-Gro 9223	73.3		56.4		4.8	+
SS 5205	73.2		56.9		3.5	
USG 3612	72.9		55.7	-	3.5	
Pioneer Brand 26R20	72.4		57.0		5.0	+
MBX12-W-270	72.1		57.8		3.8	
Pioneer Brand 25R32	71.9		56.7		4.0	
Dyna-Gro 9042	71.9		56.2		3.8	
AgriMAXX 427	71.7		55.8	-	4.0	
Progeny PGX 13-1	71.2		56.4		1.5	-
VA11MAS-7520-2-3-255	71.1		56.8		4.3	
USG 3555	70.9		56.9		4.3	
VA11W-FHB60	70.8		56.7		5.3	+
L-Brand 221	70.8		61.5	+	4.0	
MAS #36	70.2		58.3	+	4.0	
MAS #32	70.1		56.7		4.8	+
MAS #7	69.0		56.2	-	4.8	+
VA12W-102	68.8		55.8	-	5.3	+
Progeny 117	68.5		57.5		5.5	+
VA12FHB-53	68.1		57.4		4.5	
Steyer Heilman	67.7		57.2		2.5	
AgriMAXX Exp 1465	67.4		57.5		1.5	-
USG 3993	66.9		57.7		3.8	
Merl	66.7		58.7	+	4.3	
VA11W-95	66.2		57.3		4.3	
VA08MAS-369	65.6		59.3	+	4.0	
VA11W-31	64.2	-	56.6		6.3	+

Table 39. Summary of performance of entries in the Virginia Tech Wheat Test at Shenandoah Valley in Rockingham County, VA, 2014 harvest, cont'd.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)	
NC09-22402	62.8	-	57.2		3.3	
VA10W-42	62.8	-	56.2		5.0	+
Steyer Kidwell	61.2	-	55.6	-	3.0	
Average	77.9		57.1		3.3	
LSD (O.05)	13.1		0.9		1.3	
C.V.	10.8					

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 or lodging, where 0 = highly resistant and 9 = highly susceptible.

Section 5: Milling and Baking Quality

Grain samples for 46 entries in Virginia's 2013 State Wheat Test grown at Warsaw, VA were submitted to the USDA-ARS Soft Wheat Quality Lab in Wooster, OH for advanced milling and baking quality evaluations. The standard quality data were compared to the average for the cultivar checks given for this nursery, and quality scores for all entries were adjusted to the check average. A table of observed and historical quality scores for the checks is given below.

The adjusted average values of the provided checks are predicted to have increased milling, baking, and softness equivalent scores when compared to the historical average. The observed scores for the checks correlated to the historical scores for milling, baking, and softness equivalence at a level of r>0.8, r>0.9, and r>0.8, respectively. The relative scores are consistent and the results of the following quality scores are likely predictive of future results.

2013 Advanced Quality Test Data versus Historical Database Values for Checks

	From Advanced Milling Database Scoring						Predicted from Measured Data					
ENTRY	Milling Quality Score		Baking Quality Score		Softness Equivalent Score		Milling Quality Score		Baking Quality Score		Softness Equivalent Score	
Massey	68.43	C	49.08	E	61.19	C	71.57	B	61.01	C	75.19	B
Jamestown	60.49	C	46.17	E	64.54	C	57.84	D	52.03	D	70.45	B
Merl	68.13	C	65.55	C	71.01	B	68.20	C	63.93	C	79.16	B
Shirley	67.51	C	63.39	C	64.06	C	69.54	C	71.15	B	73.43	B
USG 3555	57.51	D	33.55	F	57.09	D	64.77	C	45.56	E	69.70	C
Average	64.42		51.55		63.58		66.38		58.74		73.58	
Adjustment Bias for Trial	-1.97		-7.19		-10.01							
Diagnostics - Correlations	0.8		0.9		0.8							

Additional Information on Quality Analysis

The averages of the soft wheat quality traits demonstrate that milling yield was within the expected target range for soft wheat characteristics (Table 35). Softness equivalence, along with the SRC's (Solvent Retention Capacity) of lactic acid and sodium carbonate, exceeded the expected target range. Flour protein and sucrose SRC had values below the target range. Only the data for lactic acid SRC is presented in Table 40.

Of the quality characteristics measured at the Soft Wheat Quality Laboratory, flour milling yield is the most reproducible and perhaps most important because it is genetically and environmentally associated with good soft wheat flour quality. Flour yields ranged from 62.3% to 72.3%, and 24 lines had flour yields above the test average (70.1%). Thirteen lines including Dyna-Gro 9223, VA10W-123, SY Harrison, USG 3438, AgriMAXX 415, MCIA Venus, Dyna-Gro 9171, USG 3120, Massey, SS 5205, Progeny 870, VA10W-42, and SS 8415 had flour yields (72.3 – 71.0%) that were one standard deviation above the test average.

After flour yield, the second trait that we recommend for use in selection is softness equivalent. It tends to have high heritability and is an important predictor of milling break flour yield. Larger values are preferred for most soft wheat manufactured goods, particularly cakes and other high sugar baked products. All of the wheat lines evaluated in the test seem to be true soft genotypes. Softness equivalence scores varied from 55.4% to 67.8%, and 24 lines had values above the test average (61.7%). Thirteen lines including Pioneer Brand 26R10, SY Harrison, SS 5205, USG 3251, VA10W-123, VA10W-106, VA10W-108, Dyna-Gro 9223, AgriMAXX 427, Progeny 357, Pioneer Brand 26R41, VA11W-278 and Featherstone 73 had softness equivalence values (67.8 – 63.1%) that were one standard deviation above the test average.

Flour protein concentration of the 46 lines ranged from 5.75% to 8.18% with a test average of 6.63%. Gluten strength is measured by the lactic acid SRC and is also correlated to flour protein concentration, but the effect is dependent on genotypes and growing conditions. Weaker gluten strength is desired for most pastry products, such as cookies and cakes, while stronger gluten strength is desired in production of crackers and some bread type products. Lactic acid SRC values ranged from 87.0% to 136.6% with a test average of 107.1%. Lines having the highest lactic acid SRC values were VA11W-31, Featherstone VA258, and Yorktown. Among the checks, Shirley had the lowest lactic acid SRC value at 89.6% and two lines (VA11W-301 and MCIA Venus) had values lower than Shirley.

Sucrose SRC is a measure of arabinoxylan content which can strongly affect water absorption in baked products. Soft wheat flours for cookies typically have a target of 95% or less for sucrose absorption. All but 5 lines were below 95% (Data not presented). Featherstone VA258 and Yorktown, having high lactic acid SRC values, also had the highest sucrose SRC values at 102.9% and 101.6%, respectively. Baking quality also was assessed via measurement of cookie spread diameter, which ranged from 16.48 to 19.53 cm with a test average of 18.29 cm. Thirteen wheat lines including USG 3438, SY Harrison, AgriMAXX 413, AgriMAXX 415, Dyna-Gro 9223, USG 3201, Pioneer Brand 25R53, VA11W-301, Progeny 870, Shirley, AgriMAXX 427, SS5205, and Mercer Brand 12-V-251 had cookie diameters (19.53 – 18.58 cm) that were one standard deviation above the test average.

Table 40. Milling and baking quality of entries in the Virginia Tech Wheat Test based on evaluation of the 2013 harvest.

ENTRY	Modified Milling Quality Score		Modified Baking Quality Score		Modified Softness Equivalent Score		Test Weight (LB/BU)		Flour Yield (%)		Softness Equivalent (%)		Flour Protein (at 14%)		Lactic Acid SRC (%)		Cookie Diameter (cm)	
Massey	69.60	C	53.82	D	65.18	C	60.48		71.14	+	61.50		7.41		108.93		18.24	
Jamestown	55.87	D	44.84	E	60.44	C	61.46		68.38	q	59.82	q	7.17		111.18	s	18.15	
Merl	66.23	C	56.74	D	69.15	C	60.23		70.46		62.90		6.67		102.20		18.05	
VA07W-415	68.64	C	53.45	D	60.80	C	59.23		70.95	+	59.95	q	6.57		109.07		18.38	
VA08MAS-369	63.91	C	35.46	F	58.51	D	60.69		70.00		59.14	q	7.11		114.50	s	17.28	q
VA09W-73	61.27	C	59.72	D	69.76	C	60.24		69.47		63.12	+	6.77		108.48		18.37	
VA09W-75	54.67	D	39.46	F	68.39	C	59.81		68.14	q	62.63		6.69		117.97	s	17.73	q
VA09W-188WS	70.38	B	58.71	D	60.23	C	55.17		71.30	+	59.75	q	5.75		86.98	w	18.49	
VA10W-119	68.33	C	39.75	F	50.68	D	60.97		70.89		56.37	q	8.18		117.81	s	17.90	q
VA10W-21	56.05	D	21.55	F	49.66	E	60.07		68.42	q	56.01	q	5.82		101.78	w	16.48	q
VA10W-123	72.32	B	46.89	E	77.54	B	59.54		71.69	+	65.87	+	6.00		102.85		17.55	q
VA10W-140	68.20	C	53.31	D	57.50	D	60.13		70.86		58.78	q	6.66		108.97		18.39	
VA10W-42	68.94	C	52.30	D	62.00	C	59.69		71.01	+	60.37		6.73		104.22		18.02	q
VA10W-96	59.97	D	46.56	E	59.01	D	60.69		69.20	q	59.31	q	6.94		123.79	s	18.16	
VA11W-31	59.73	D	32.57	F	50.84	D	61.21		69.16	q	56.42	q	7.90		136.59	s	17.72	q
VA11W-106	59.01	D	53.46	D	76.42	B	58.52		69.01	q	65.47	+	6.17		104.86		18.00	q
VA11W-108	56.61	D	48.65	E	76.30	B	58.68		68.53	q	65.43	+	6.53		113.07	s	17.94	q
VA11W-230	59.42	D	43.68	E	62.89	C	61.36		69.09	q	60.69		6.88		117.11	s	18.05	
VA11W-278	60.89	C	65.27	C	70.58	B	59.33		69.39		63.40	+	6.50		110.93		18.57	
VA11W-301	66.96	C	64.59	C	63.95	C	58.53		70.61		61.06		6.42		87.07	w	18.89	+
Yorktown	51.38	D	26.89	F	66.25	C	60.42		67.48	q	61.87		6.93		123.90	s	17.44	q
Dyna-Gro 9171	70.06	B	65.03	C	66.85	C	58.51		71.23	+	62.09		6.68		100.89	w	18.36	
Dyna-Gro 9223	75.11	B	79.44	B	75.36	B	58.70		72.25	+	65.10	+	6.26		106.15		19.04	+
Dyna-Gro 9042	59.78	D	52.74	D	65.40	C	59.14		69.17	q	61.57		6.48		115.90	s	18.28	
Featherstone VA258	50.29	D	22.02	F	47.97	E	59.45		67.26	q	55.41	q	7.87		125.24	s	17.72	q
Mercer Brand 12-V-251	61.48	C	53.11	D	54.79	D	58.19		69.51		57.82	q	6.65		97.72	w	18.58	+

Table 40. Milling and baking quality of entries in the Virginia Tech Wheat Test based on evaluation of the 2013 harvest, cont'd.

ENTRY	Modified Milling Quality Score		Modified Baking Quality Score		Softness Equivalent Score		Test Weight (LB/BU)		Flour Yield (%)		Softness Equivalent (%)		Flour Protein (at 14%)		Lactic Acid SRC (%)		Cookie Diameter (cm)	
Shirley	67.57	C	63.96	C	63.42	C	57.81		70.73		60.87		6.78		89.55	w	18.87	+
Pioneer 26R10	62.28	C	58.95	D	83.09	A	59.39		69.67		67.83	+	6.42		106.70		18.02	q
Pioneer 26R20	58.22	D	55.57	D	67.90	C	59.46		68.85	q	62.46		6.12		104.11		18.16	
Pioneer Brand 26R41	65.32	C	60.66	C	72.13	B	58.15		70.28		63.96	+	6.19		104.49		18.42	
Pioneer Brand 26R53	65.82	C	66.30	C	68.71	C	59.99		70.38		62.75		6.88		108.48		18.91	+
SS 8412	62.68	C	53.50	D	68.93	C	59.54		69.75		62.82		6.94		114.27	s	18.29	
SS 520	66.63	C	35.17	F	55.73	D	57.60		70.55		58.15	q	6.54		108.73		17.31	q
SS 5205	69.29	C	73.70	B	78.34	B	59.25		71.08	+	66.15	+	6.27		111.33	s	18.59	+
SS 8340	68.21	C	61.56	C	64.76	C	59.63		70.86		61.35		6.08		98.56	w	18.29	
SY Harrison	71.88	B	86.30	A	81.59	A	57.60		71.60	+	67.30	+	6.25		105.26		19.23	+
AgriMAXX 413	68.25	C	79.58	B	67.65	C	57.43		70.87		62.37		6.18		98.48	w	19.17	+
AgriMAXX 415	70.38	B	70.71	B	61.35	C	58.97		71.30	+	60.14		6.39		102.67		19.08	+
AgriMAXX 427	61.45	C	70.02	B	73.24	B	58.02		69.50		64.35	+	6.07		101.42	w	18.83	+
USG 3555	62.80	C	38.38	F	59.69	D	59.66		69.78		59.55	q	7.58		109.23		18.11	
USG 3201	66.93	C	67.39	C	61.84	C	59.67		70.61		60.32		6.69		105.50		18.98	+
USG 3251	58.19	D	60.94	C	77.77	B	59.37		68.85	q	65.95	+	6.21		101.85	w	18.29	
USG 3438	71.03	B	83.38	A	69.04	C	57.08		71.43	+	62.86		6.26		98.62	w	19.53	+
USG 3120	69.68	C	54.50	D	66.55	C	60.53		71.16	+	61.98		6.60		97.17	w	18.27	
Progeny 870	69.21	C	74.91	B	69.39	C	57.72		71.06	+	62.99		6.30		98.32	w	18.88	+
Progeny 357	62.10	C	56.66	D	72.67	B	56.65		69.63		64.15	+	6.64		104.39		18.35	
Average	**64.20**		**55.26**		**65.87**		**59.22**		**70.06**		**61.74**		**6.63**		**107.11**		**18.29**	

Footnotes

'q' - questionable or undesirable quality. Marked on lines greater than a standard deviation from the mean of the checks in a unpreferred level.

'+' - Above average quality marked on lines with greater than a standard deviation away from mean of the checks in a preferred level

's' - strong gluten. Greater than one standard deviation more than the mean of checks.

'w' - weak gluten. Greater than one standard deviation less than the mean of the check.

Section 6: Wheat Scab Research

One of the primary research objectives of the Virginia Tech wheat breeding program is to identify and develop cultivars possessing resistance to Fusarium Head Blight (FHB) or scab. Each year all wheat entries in Virginia's Official State Variety Trials are evaluated for FHB resistance in an inoculated, irrigated nursery at the Blacksburg test site. Data from this test for the current crop year and two- and three-year averages for FHB incidence, FHB severity and FHB Index (incidence x severity / 100) are included in this bulletin (Tables 39 – 41) to aid producers in selection of cultivars on the basis of FHB resistance. Cultivars possessing complete resistance or immunity to FHB have not been identified and resistance levels in currently available cultivars vary from moderately resistant to highly susceptible.

A major goal of the breeding program is to identify and incorporate unique and complementary types of FHB resistance into cultivars to enhance the overall level of resistance. Genes controlling FHB resistance have been identified on more than six chromosomes in wheat and some of these genes are complementary in nature and effect different disease resistance components such as FHB incidence, severity, and DON toxin content. Incorporating such multiple resistance genes having additive effects on FHB resistance into cultivars will enhance the overall level of resistance. Because the individual resistance genes are located on different wheat chromosomes and each gene confers only partial resistance to FHB, identifying wheat lines having multiple resistance genes is difficult using traditional breeding techniques. To overcome this limitation, our program is currently identifying and using DNA markers located close to these resistance genes on the same chromosome as "tags" for selecting wheat lines possessing different combinations of these complementary resistance genes.

Entries were inoculated two times by spreading scabby corn seeds in plots at the booting stage and a week later, and by spraying a *Fusarium graminearum* spore suspension directly onto spikes at the 50% flowering stage. A high FHB incidence and severity were obtained in 2014. Among 116 lines and varieties tested in 2014, the FHB index varied from 0.2 to 63.2 with FHB incidence ranging from 2.6% to 87.5% and FHB severity ranging from 3.5% to 76.8% (Table 39). Thirty-three lines and 41 varieties had FHB index values lower than the mean (<14.7) and expressed moderate resistant to FHB in 2014. Based on two year mean data for 2013 and 2014 (Table 40), four lines and 11 varieties had FHB index values lower than the test mean (<12.1) and DON content lower than 2.0 ppm. Two lines and seven varieties tested across three years (2012-2014) had average FHB index values lower than the test mean of 8.9 and DON content lower than 2.0 ppm (Table 41). The lines and varieties expressing resistance to FHB based on three-year mean data are: Progeny 125, Jamestown, VA10W-123, Progeny 117, Massey, Pioneer Brand 25R32, Progeny 185, VA10W-119, and USG 3120.

Table 41. Summary of reaction of entries in the Virginia Tech State Wheat Test to Fusarium head blight (scab) and glume blotch resistance, 2014 harvest.

LINE	pm		FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index
Dyna-Gro 9343	0.5		2.6	-	3.5		0.2		1
MAS #4	3.5	+	12.5	-	8.8		1.1		2
VA11W-313	1.5		25.7		9.1		2.3		3
USG 3201	2.0		25.0		12.0		3.0		4
USG 3833	3.5	+	17.5		12.8		3.0		5
Progeny 125	3.0	+	25.0		14.8		3.6		6
Dyna-Gro 9171	1.0		32.5		11.3		3.7		7
AgriMAXX Exp 1450	0.5		30.0		13.5		4.1		8
MD04W249-11-12	0.0		25.0		13.9		4.2		9
Steyer Kidwell	2.5		40.0		10.8		4.3		10
Jamestown	0.0		40.0		12.0		4.4		11
MBX14-S-210	0.0		30.0		19.2		4.4		12
VA12W-102	1.0		37.5		12.0		4.4		13
USG 3612	1.0		35.0		12.9		4.6		14
SS 8870	0.0		25.0		18.3		4.6		15
AgriMAXX Exp 1465	3.0	+	37.5		11.9		4.7		16
USG 3438	2.0		35.0		13.9		4.9		18
VA11W-FHB60	0.0		37.5		13.0		4.9		17
Progeny 870	1.5		38.4		12.9		5.0		19
USG 3993	1.0		25.0		18.4		5.1		20
SS 8360	1.5		27.5		16.5		5.1		21
VA10W-123	0.5		27.5		20.5		5.5		22
VA11W-108	0.0		37.5		15.2		5.6		23
MAS #33	2.5		40.0		13.6		5.7		24
MAS #31	0.5		25.0		22.7		5.7		25
SY 007	0.0		30.0		19.3		5.7		26
Massey	0.5		35.0		16.6		5.8		27
AgriMAXX 434	2.0		30.0		19.8		5.9		28
MAS #34	1.0		52.5		11.4		6.0		29
USG 3555	0.5		30.0		20.8		6.2		30
Pioneer Brand 26R53	2.5		22.5		26.7		6.3		31
Pioneer Brand 26R41	1.5		45.0		14.1		6.3		32
USG 3120	0.0		42.5		16.2		6.5		33
AgriMAXX 415	4.0	+	32.5		17.4		6.5		34
VA10W-96	0.0		37.5		17.1		6.6		35
MBX12-W-296	1.5		22.5		23.8		6.6		37

Table 41. Summary of reaction of entries in the Virginia Tech State Wheat Test to Fusarium head blight (scab) and glume blotch resistance, 2014 harvest, cont'd.

LINE	pm		FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index
MAS #32	2.0		52.5		11.7		6.6		36
AgriMAXX 413	1.5		27.5		38.0		6.9		38
Yorktown	1.0		30.0		25.1		7.0		39
SY 474	0.5		27.5		24.2		7.2		40
USG 3523	1.0		42.5		15.1		7.9		41
MAS #35	3.0	+	42.5		18.4		7.9		42
Progeny 117	1.0		40.0		20.1		8.1		43
VA11W-230	0.0		42.5		19.2		8.2		44
VA11W-106	2.0		37.5		19.7		8.3		45
VA12W-72	0.5		30.0		35.0		8.3		46
MD04W249-11-7	0.5		35.0		23.1		8.4		47
SS 8340	2.5		27.5		36.7		8.6		48
Pioneer Brand 26R12	3.0	+	32.5		28.0		8.7		49
MAS #37	2.5		37.5		19.7		9.0		50
USG 3315	0.0		37.5		24.9		9.2		51
VA12W-54	0.5		47.5		18.3		9.3		52
Steyer Heilman	2.0		32.5		24.3		9.6		53
AgriMAXX 427	1.0		42.5		23.0		9.7		54
MAS #6	2.0		40.0		24.6		9.8		55
AgriMAXX 447	3.0	+	27.5		40.2		9.9		56
Progeny PGX 13-2	2.0		47.5		21.4		10.4		57
Dyna-Gro 9042	1.0		27.5		44.8		10.4		58
VA12FHB-34	1.0		35.0		29.6		10.8		59
VA10W-119	1.0		45.0		20.6		10.8		60
VA11W-95	0.5		20.0		48.7		11.1		61
MBX14-K-297	2.5		52.5		20.7		11.5		62
Progeny 185	2.0		47.5		21.7		11.6		63
L-Brand 221	0.0		37.5		29.0		11.8		64
VA11W-31	0.0		50.0		25.1		12.0		65
Pioneer Brand 25R32	0.0		57.5		21.0		12.0		66
MAS #2	1.5		30.0		39.6		12.8		67
VA12FHB-53	0.0		45.0		27.9		13.1		68
VA12W-26	0.5		45.0		25.1		13.2		69
MBX12-W-270	2.0		42.5		35.0		13.3		70
VA11W-111	0.0		52.5		25.7		13.7		71
AgriMAXX Exp 1444	2.5		30.0		46.8		13.8		72
Dyna-Gro 9223	2.5		45.0		29.6		13.8		73

Table 41. Summary of reaction of entries in the Virginia Tech State Wheat Test to Fusarium head blight (scab) and glume blotch resistance, 2014 harvest, cont'd.

LINE	pm		FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index
MAS #36	2.0		42.5		32.7		14.1		74
Pioneer Brand 26R10	2.0		45.0		32.3		14.9		75
VA11W-279	0.5		47.5		33.6		15.0		76
VA11W-278	0.5		55.0		31.1		15.2		77
VA12W-150	0.5		42.5		36.9		15.2		78
MAS #7	1.0		27.5		56.0		15.6		79
Featherstone 73	1.5		45.0		35.4		15.9		80
VA11W-182	0.0		70.0		23.2		16.1		81
MAS #23	1.5		57.5		26.6		16.1		82
VA10W-140	1.0		45.0		29.6		16.2		83
NC-Cape Fear	0.0		67.5		23.0		16.6		84
Pioneer Brand 25R40	0.5		52.5		32.7		17.2		85
USG 3404	1.0		52.5		33.4		17.3		86
USG 3013	2.5		40.0		44.5		17.7		87
MAS #10	4.0	+	30.0		65.4	+	19.4		88
USG 3251	2.0		47.5		41.9		19.7		89
SS 5205	0.0		50.0		36.0		20.0		91
VA12FHB-37	0.0		67.5		29.6		20.0		90
NC09-22402	0.5		45.0		43.9		20.1		92
VA10W-42	0.5		55.0		27.8		20.2		93
Progeny PGX 13-1	4.0	+	37.5		56.0		20.7		94
VA12FHB-85	1.0		55.0		39.5		22.3		95
Steyer Hunker	2.5		40.0		56.3		22.5		96
MBX12-V-251	0.0		67.5		34.3		23.2		97
VA08MAS-369	0.5		65.0		35.4		23.4		98
VA10W-21	0.0		65.0		30.9		23.6		99
SY 483	1.0		42.5		61.8	+	26.3		100
SS 520	0.5		62.5		33.0		26.4		101
VA11W-301	0.0		77.5	+	41.4		29.6		102
Progeny 357	2.5		77.5	+	39.7		30.9		103
Merl	1.0		60.0		51.5		30.9		104
MBX11-V-258	0.5		77.5	+	45.1		34.8	+	105
GA-041293-11LE37	0.5		60.0		59.8	+	35.9	+	106
SS 8412	1.0		57.5		63.7	+	36.1	+	107
Pioneer Brand 26R20	1.0		60.0		60.5	+	36.3	+	108
GA-041293-11E54	0.0		62.5		66.4	+	42.4	+	109
GA-04434-11E44	0.0		60.0		73.0	+	43.9	+	110

Table 41. Summary of reaction of entries in the Virginia Tech State Wheat Test to Fusarium head blight (scab) and glume blotch resistance, 2014 harvest, cont'd.

LINE	pm		Incidence[1]		Severity[2]		FHB Index[3]		FHB
SS 8415	0.0		57.5		76.8	+	44.1	+	111
USG 3024	0.5		67.5		67.7	+	45.5	+	112
Featherstone VA258	0.0		80.0	+	56.9		48.5	+	113
VA11MAS-7520-2-3-255	0.0		72.5	+	70.0	+	49.7	+	114
Shirley	0.0		87.5	+	58.1	+	53.5	+	115
NC08-21273	1.0		85.0	+	74.3	+	63.2	+	116
Average	1.2		43.3		30.3		14.7		
LSD (O.05)	1.6		27.2		27.6		18.2		
C.V.	68.3		31.8		45.9		62.5		

Released cultivars are shown in bold print. Varieties are ordered by ascending index averages.
A plus or minus sign indicates a performance significantly above or below the average.
Entries were planted in 2-row plots, 4 ft in length at Blacksburg, VA and were inoculated at 50% and 100% heading stages with Fusarium graminearum spore suspension (50,000 spores/ml).

[1]Scab Incidence (%): Percentage of infected spikes among 10 randomly selected spikes.

[2]Scab Severity (%): Percentage of infected spikelets among 10 infected spikes.

[3]Scab Index = Incidence X Severity/100; it is an overall indicator of scab resistance/susceptibility level.

Table 42. Two year average summary of reaction of entries in the Virginia Tech State Wheat Tests to Fusarium head blight (scab) and glume blotch resistance, 2013 and 2014 harvests.

LINE	ID	FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	DON[4] (ppm)	
Dyna-Gro 9343	1226	13.8	-	3.0	-	0.4		1	4.6	+
USG 3201	1130	27.5	-	7.6		2.0		2	2.5	
Progeny 125	1163	25.0	-	9.1		2.2		3	2.7	
USG 3993	1249	22.5	-	10.1		2.7		4	5.4	+
Jamestown	809	40.0		8.3		3.1		5	1.8	
AgriMAXX 434	1240	30.0	-	13.8		4.1		6	3.2	
MBX12-W-296	1232	26.3	-	15.2		4.3		7	4.6	+
Yorktown	1117	33.8		14.5		4.3		8	3.0	
VA11W-108	1218	43.8		10.5		4.3		9	2.8	
VA10W-96	1210	37.5		11.0		4.3		10	2.9	
Progeny 870	1165	44.2		10.2		4.5		11	2.6	
Pioneer Brand 26R53	1181	32.5		16.7		4.5		12	2.7	
USG 3612	1185	35.0		12.9		4.6		13	7.2	+
MD04W249-11-7	1236	28.8	-	13.1		4.6		14	3.0	
VA10W-123	1173	41.3		13.7		4.6		15	1.4	
AgriMAXX 415	1191	40.0		11.8		5.0		16	1.9	
USG 3438	1160	41.3		12.4		5.1		17	1.8	
Steyer Heilman	1255	28.8	-	13.9		5.3		18	6.9	+
Progeny 117	1066	37.5		12.7		5.3		19	2.2	
Massey	17	47.5		13.2		6.0		20	2.8	
Pioneer Brand 25R32	1099	38.8		11.5		6.2		21	1.4	
SY 474	1247	33.8		17.7		6.2		22	1.3	
SS 8340	1167	35.0		22.7		6.3		23	2.6	
AgriMAXX 427	1192	46.3		14.5		6.3		24	3.6	+
AgriMAXX 413	1190	43.8		24.1		6.5		25	1.8	
Dyna-Gro 9171	1162	53.8		12.2		6.8		26	2.4	
MBX12-W-270	1230	37.5		19.2		7.2		27	6.9	+
VA11W-106	1217	56.3		13.8		7.3		28	1.8	
Dyna-Gro 9042	1193	35.0		27.1		7.6		29	2.2	
Dyna-Gro 9223	1194	43.8		16.8		7.8		30	2.6	
USG 3523	1251	50.0		13.6		7.8		31	0.3	
Progeny 185	1065	43.8		15.6		8.0		32	2.6	
VA10W-119	1156	51.3		15.3		8.3		33	2.6	
VA11W-31	1216	56.3		16.9		8.9		34	2.0	
Pioneer Brand 26R10	1159	48.8		19.0		9.0		35	1.9	

Table 42. Two year average summary of reaction of entries in the Virginia Tech State Wheat Tests to Fusarium head blight (scab) and glume blotch resistance, 2013 and 2014 harvests, cont'd.

LINE	ID	FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	DON[4] (ppm)	
Pioneer Brand 26R41	1179	60.0		14.9		9.0		36	2.9	
USG 3555	814	75.0	+	11.9		9.1		37	6.2	+
VA11W-230	1222	55.0		16.7		9.1		38	1.7	
Pioneer Brand 26R12	316	52.5		21.1		9.5		39	4.0	+
VA10W-140	1175	45.0		17.7		9.5		40	2.6	
USG 3013	1250	46.3		24.6		10.1		41	2.0	
USG 3404	1252	48.8		21.2		11.3		42	0.9	
VA11W-278	1223	63.8		20.6		11.4		43	2.6	
USG 3120	1093	55.0		20.3		11.7		44	1.3	
Steyer Hunker	1254	38.8		29.8		11.9		45	2.2	
Pioneer Brand 25R40	1237	63.8		21.5		12.8		46	6.2	+
SS 5205	272	57.5		22.6		13.0		47	5.4	+
VA10W-21	1171	58.8		18.2		13.3		48	3.8	+
NC09-22402	1235	58.8		27.9		14.3		49	3.0	
SY 483	1246	38.8		34.4		14.4		50	0.1	
USG 3251	1131	58.8		27.3		14.4		51	2.8	
Featherstone 73	1144	55.0		26.6		14.7		52	3.8	+
MBX12-V-251	1013	65.0		23.5		15.6		53	2.6	
VA08MAS-369	1138	66.3		23.5		15.6		54	3.3	
VA10W-42	1209	66.3		21.6		16.1		55	3.5	+
NC-Cape Fear	1096	73.8	+	21.6		16.4		56	5.1	+
SS 520	725	58.8		24.5		18.2		57	6.8	+
Merl	829	61.3		32.2		19.7		58	3.4	+
SS 8412	1074	52.5		35.8		20.4		59	3.4	+
Progeny 357	1166	73.8	+	27.0		20.5		60	3.2	+
VA11W-301	1224	73.8	+	30.5		21.8		61	3.4	+
MBX11-V-258	1231	78.8	+	41.9	+	33.4	+	62	9.1	+
Pioneer Brand 26R20	1098	80.0	+	46.6	+	34.5	+	63	3.0	
SS 8415	1080	63.8		57.4	+	35.6	+	64	7.8	+
Featherstone VA258	1016	80.0	+	48.1	+	40.0	+	65	2.8	

Table 42. Two year average summary of reaction of entries in the Virginia Tech State Wheat Tests to Fusarium head blight (scab) and glume blotch resistance, 2013 and 2014 harvests, cont'd.

LINE	ID	FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	DON[4] (ppm)	
Shirley	828	90.0	+	44.2	+	40.8	+	66	4.3	+
NC08-21273	1234	86.3	+	47.6	+	40.9	+	67	5.0	+
USG 3024	1228	80.0	+	58.3	+	45.4	+	68	6.6	+
Average		50.5		21.4		12.1			3.3	
LSD (O.05)		19.8		16.3		12.1				
C.V.		27.7		53.2		69.9				

Released cultivars are shown in bold print. Varieties are ordered by ascending index averages.
A plus or minus sign indicates a performance significantly above or below the average.
Entries were planted in 2-row plots, 4 ft in length at Blacksburg, VA and were inoculated at 50% and 100% heading stages with Fusarium graminearum spore suspension (50,000 spores/ml).

[1]Scab Incidence (%): Percentage of infected spikes among 10 randomly selected spikes.

[2]Scab Severity (%): Percentage of infected spikelets among 10 infected spikes.

[3]Scab Index = Incidence X Severity/100; it is an overall indicator of scab resistance/susceptibility level.

[4] Don Values were measured (pooled over replications) from the 2013 harvest year.

Table 43. Three year average summary of reaction of entries in the Virginia Tech State Wheat Tests to Fusarium head blight (scab) and glume blotch resistance, 2012 - 2014 harvests.

LINE	Heading date (Julian)		FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	DON[4] (ppm)	
USG 3201	119.0	+	23.3	-	5.5		1.4		1	2.3	
Progeny 125	109.5	-	25.8	-	6.7		1.7		2	1.8	
Jamestown	109.5	-	29.2	-	5.7		2.1		3	1.3	
Yorktown	113.0		30.0	-	10.4		3.0		4	2.2	
VA10W-123	112.5	-	35.8		9.8		3.3		5	1.1	
AgriMAXX 415	118.5	+	33.3		8.7		3.5		6	2.1	
Progeny 117	108.5	-	32.5		9.1		3.7		7	1.4	
Pioneer Brand 26R53	118.0	+	35.8		12.7		3.7		8	2.6	
Massey	111.0	-	35.8		9.1		4.0		9	1.9	
Progeny 870	116.0		48.6		8.8		4.3		10	3.7	+
SS 8340	118.0	+	30.0	-	15.7		4.4		11	2.2	
AgriMAXX 427	115.5		39.2		10.3		4.4		12	2.3	
Pioneer Brand 25R32	120.5	+	38.3		8.8		4.6		13	1.5	
USG 3438	116.0		45.8		10.4		4.9		14	3.8	+
AgriMAXX 413	117.0		44.2		17.5		5.0		15	3.8	+
Progeny 185	113.5		39.2		11.3		5.6		16	2.0	
VA10W-119	110.5	-	40.8		11.0		5.7		17	1.6	
Dyna-Gro 9171	116.5		56.7		10.6		6.1		18	3.4	+
Dyna-Gro 9042	118.5	+	40.0		20.4		6.3		19	3.2	+
Dyna-Gro 9223	119.5	+	47.5		13.6		6.5		20	2.5	
VA10W-140	116.5		40.0		12.8		6.6		21	2.4	
Pioneer Brand 26R12	116.0		45.8		15.1		6.7		22	3.0	+
Pioneer Brand 26R10	119.0	+	51.7		15.1		7.5		23	3.2	+
USG 3120	109.0	-	49.2		14.5		8.2		24	1.2	
Pioneer Brand 26R41	118.0	+	65.0	+	13.2		8.5		25	4.0	+
SS 5205	112.5	-	48.3		15.8		8.9		26	3.4	+
VA10W-21	115.5		43.3		12.4		8.9		27	2.4	
Featherstone 73	117.5		42.5		18.3		9.9		28	2.9	+
VA08MAS-369	114.0		56.7		16.6		10.8		29	3.8	+
USG 3251	121.0	+	59.2		20.4		10.9		30	2.6	
MBX12-V-251	112.0	-	53.3		17.2		10.9		31	2.1	
NC-Cape Fear	109.5	-	60.8		15.9		11.7		32	2.8	+
SS 520	111.0	-	45.8		17.3		12.4		33	3.8	+
SS 8412	116.0		37.5		24.1		13.6		34	3.5	+
Merl	116.0		57.5		23.9		14.5		35	3.9	+
Progeny 357	120.0	+	70.8	+	21.5		16.1		36	2.5	

Table 43. Three year average summary of reaction of entries in the Virginia Tech State Wheat Tests to Fusarium head blight (scab) and glume blotch resistance, 2012 - 2014 harvests, cont'd.

LINE	Heading date (Julian)		FHB Incidence[1] (%)		FHB Severity[2] (%)		FHB Index[3] (0-100)		Rank FHB Index	DON[4] (ppm)	
Pioneer Brand 26R20	120.5	+	74.2	+	33.8	+	24.7	+	37	4.5	+
SS 8415	115.5		57.5		41.0	+	25.0	+	38	4.8	+
Featherstone VA258	114.0		72.5	+	34.8	+	28.6	+	39	2.5	
Shirley	117.5		76.7	+	32.0	+	28.8	+	40	3.4	+
Average	115.3		46.5		15.8		8.9			2.7	
LSD (O.05)	2.3		16.2		11.7		8.9			3.4	
C.V.	1.0		30.5		64.6		87.3			61.2	

Released cultivars are shown in bold print. Varieties are ordered by ascending index averages.
A plus or minus sign indicates a performance significantly above or below the average.
Entries were planted in 2-row plots, 4 ft in length at Blacksburg, VA and were inoculated at 50% and 100% heading stages with Fusarium graminearum spore suspension (50,000 spores/ml).
[1]Scab Incidence (%): Percentage of infected spikes among 10 randomly selected spikes.
[2]Scab Severity (%): Percentage of infected spikelets among 10 infected spikes.
[3]Scab Index = Incidence X Severity/100; it is an overall indicator of scab resistance/susceptibility level.
[4]DON values were measured from the 2012 and 2013 harvest year.

Section 7: Triticale Varieties

Table 44. Summary of performance of entries in the Virginia Tech Triticale Test, over locations, 2014 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)		Grain Protein[1] %		Grain Starch[1] %	
NCT07-1031	63.4		54.1	+	2.0		12.9	+	49.5	-
Trical 342	63.1		52.0	-	1.5		11.3	-	51.4	+
154	61.5		54.5	+	3.3		12.6		50.8	+
NCT07-1088	59.0		54.5	+	2.3		12.5		50.8	+
Arcia	58.2		53.3		2.3		12.9	+	50.6	
NCT08-26	54.9		52.6		2.0		12.6		50.2	
08GX15	53.6	-	50.0	-	2.5		12.8		48.3	-
Average	59.1		53.0		2.3		12.5		50.2	
LSD (O.05)	5.3		0.5		1.0		0.3		0.4	
C.V.	8.9									

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.
[1] As-is basis

Table 45. Summary of performance of entries in the Virginia Tech Triticale Test, Southern Piedmont AREC, Blackstone, VA, 2014 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)		Grain Protein[1] %		Grain Starch[1] %	
154	78.0	+	55.2	+	3.3	+	13.7		50.3	
Trical 342	72.3		53.8		1.5		12.3	-	51.7	+
NCT07-1088	71.3		55.2	+	2.3		13.6		50.8	
NCT07-1031	70.5		54.2	+	2.0		14.3	+	49.1	-
Arcia	68.9		54.1		2.3		14.0		50.2	
NCT08-26	68.6		53.9		2.0		13.8		49.9	
08GX15	63.0	-	49.2	-	2.5		14.0		48.1	-
Average	70.4		53.6		2.3		13.7		50.0	
LSD (O.05)	7.3		0.6		1.0		0.5		0.6	
C.V.	7.0									

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.
[1] As-is basis

Table 46. Summary of performance of entries in the Virginia Tech Triticale Test, Tidewater AREC, Holland, VA, 2014 harvest.

Line	Yield (Bu/a)		Test Weight (Lb/bu)		Lodging (0-9)		Grain Protein[1] %		Grain Starch[1] %	
NCT07-1031	56.4	+	54.0	+	na		11.4		11.4	
Trical 342	53.8		50.3	-	na		10.3	-	10.3	-
Arcia	47.5		52.5		na		11.8	+	11.8	
NCT07-1088	46.6		53.9	+	na		11.4		11.4	-
154	45.1		53.7	+	na		11.4		11.4	
08GX15	44.2		50.8	-	na		11.6		11.6	
NCT08-26	41.2		51.4	-	na		11.5		11.5	
Average	47.8		52.3				11.4		11.4	
LSD (O.05)	8.2		0.8				0.4		0.7	
C.V.	11.5									

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.

[1] As-is basis