

Small Grain Forage Variety Testing, 2012

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Introduction

A forage production trial of commercial barley, oats, rye, triticale, and wheat cultivars has been conducted yearly from 1994-2012 at the Northern Piedmont AREC, Orange. Results from the 2011-12 crop season are presented in this report.

Management and Weather

Preplant fertilizer of 30-80-60 was applied on October 5, 2011. Plots were planted on Oct. 26, 2011 and were seven, seven inch rows wide by 13 feet long, trimmed to 9 feet for harvest. Nitrogen as UAN at a rate of 60 lb of N per acre was applied on March 12, 2012. All plots were harvested for forage yield at the boot (GS 45) stage as each entry reached that stage. Two rows, the entire length of the plots (were harvested with a 12-inch Jari sickle-bar mower and weighed with an electronic hanging scale.

Late summer in the Commonwealth brought significant rain to most areas. However by September, weather was favorable for harvest and corn harvest was ahead of the normal pace. This influenced wheat seeding in many areas with 26% of intended wheat acres planted by early October, compared to the 5-yr average of 7%. Precipitation in many areas at the end of October meant that planted acreage only rose to about 35% of intended by the end of the third week of October, however. By the first week of November, growers had planted 57% of the acres they indicated they planned which was slightly below the 5-yr average of 61%. Rain in mid to late November meant planting continued at a slightly slower pace, but rain benefitted the early planted wheat and barley. December was warmer and generally wetter than normal. January and February were very mild which left many fields far advanced but growers concerned about apply N that early and encouraging too much winter growth and increasing the likelihood of spring freeze injury. On April 20, growers indicated that 70 and 57% of the wheat and barley crops, respectively were in good condition. Grain harvest came early in many areas and by May 20, virtually all the wheat in the state was headed compared to the 5-yr average of 77% headed by this date. This trend continued and by June 17, 98% of barley harvest and 58% of wheat harvest was complete.

Figure 1. 2011-12 Monthly growing season precipitation measured at the Northern Piedmont AREC, Orange, VA

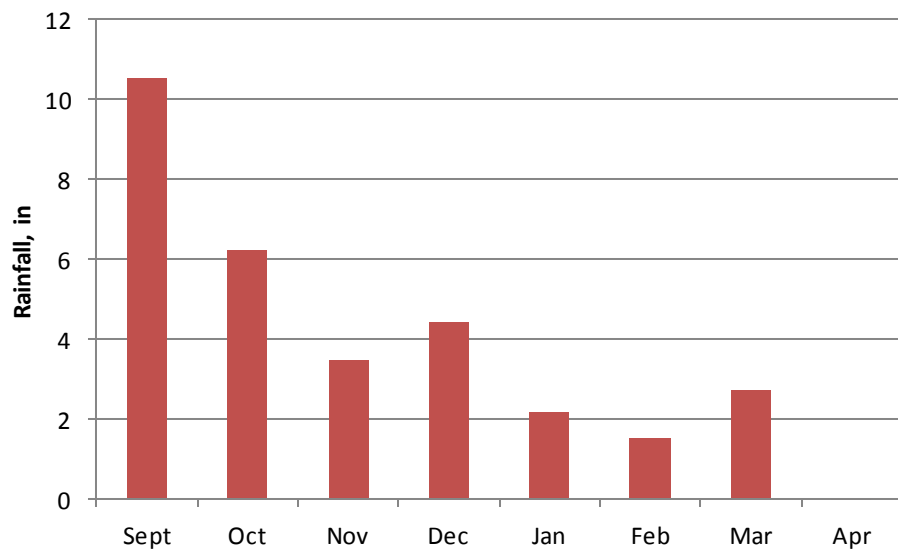


Figure 2. Monthly average growing season temperatures, 2011-12, Orange, VA.

Results

Results are reported for 35 percent dry matter (DM) yield, DM yield, and nutritive value for wheat, barley, rye, and triticale crops.

Experimental plots vary in yield and other measurements due to their location in the field and other factors which cannot be controlled. The statistics given in the tables are intended to help the reader make valid comparisons between cultivars. The magnitude of differences which may have been due to experimental error has been computed for the data and listed at the bottom of columns as the LSD (.05) (least significant difference with 95 percent confidence). Differences must be greater than the LSD to be believed to truly exist.

Table 1. Small Grain Forage Variety Test, Northern Piedmont AREC, Orange, Va 2010-2011, Boot Stage Harvest

Northern Piedmont AREC, Orange, Va 2011-12											
Boot Stage											
Cultivar	Species [†]	Harvest Date	Zadoks Maturity	Height (inches)	Lodging %	% Crude Protein	ADF %	NDF %	TDN %	35% DM Yield (tons/ac)	DM Yield (tons/ac)
Thoroughbred	B	4/5	40	31	0	13.75	35.61	59.87	59	5.19	1.82
Atlantic	B	3/29	47	27	0	16.07	31.81	60.07	62	3.55	1.25
Nomini	B	3/29	48	30	0	15.81	32.24	60.04	62	3.28	1.15
Grazemaster	R	3/19	45	35	0	15.74	35.76	63.26	60	3.74	1.31
Wintergrazer 70	R	3/19	45	34	0	12.45	35.32	63.31	58	3.56	1.25
Trical 141	T	4/16	47	39	0	16.24	33.69	61.30	61	7.91	2.76
Arcia	T	4/9	47	30	0	12.58	35.71	60.13	58	7.48	2.62
Trical 815	T	4/16	48	31	0	13.22	32.74	58.69	61	7.39	2.59
Trical 336	T	4/16	48	31	0	12.39	32.16	57.97	61	6.18	2.16
Trical 342	T	4/5	48	34	0	13.80	35.65	61.57	59	6.06	2.12
Monarch	T	4/5	47	33	0	12.37	35.04	61.15	59	5.87	2.05
NCPT01-1433	T	4/5	47	30	0	17.10	32.42	56.75	62	5.17	1.81
NCT05-2651	T	4/5	48	30	0	12.47	36.21	62.85	57	4.81	1.68
Merl	W	4/16	49	29	0	12.02	30.28	57.04	62	5.79	2.04
Featherstone 258	W	4/16	49	32	0	12.61	31.37	57.79	61	5.74	2.01
Jamestown	W	4/9	47	25	0	14.02	29.32	54.86	64	5.66	1.98
LSD 0.05						2.34	3.11	3.15	4	1.07	0.38

[†] B - Barley, R - Rye, T - Triticale, W - Wheat

Compared to 2011, 35% DM forage yield over all entries was 3.5 ton/ac less in 2012. Crude protein was 2.1 % lower and TDN was 6% lower in 2012 compared to 2011. Overall, the triticale entries produced the most dry matter, followed by wheat. Many entries, especially the barley varieties, reached the boot stage very early compared to the long-term average cutting date for this test. The warm and relative dry March and April this year probably explain the generally shorter plants, lower yields, and earlier harvest.