



## Small Grain Forage Variety Testing, 2013

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### Introduction

A forage production trial of commercial barley, oats, rye, triticale, and wheat cultivars has been conducted yearly from 1994-2013 at the Northern Piedmont AREC, Orange. Results from the 2012-13 crop season are presented in this report.

### Management and Weather

Preplant fertilizer of 30-60-40 was applied on September 26, 2012. Plots were planted on Oct. 11, 2012 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 15, 2013. 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.

Most small grain in the state was seeded timely in fall 2012 due to cooperative weather. By mid-October, 22% of wheat and 72% of barley was planted, which was ahead of the five-year average for both crops. Early November brought hurricane Sandy and the associated rains which left some flooded areas and killed wheat and barley in low spots in fields in some areas. These rains slowed the final wheat acres, but by November 25, 77% of the crop was seeded, which was still 8% ahead of the long term average. In most of the Commonwealth the month of December was relatively mild and dry until rains at the very end of the month. January was mostly dry but cold in most areas, which delayed small grain tillering in many areas. On January 30, 2013, 66% of the small grain crop was rated good, 22% fair, and only 8% excellent. A good portion of February and March was unseasonably cold but the wheat crop was still rated 65% good at the end of March. By April 15 warm weather, 14 degrees above normal for some areas, had arrived along with some rains that helped the small grain crop develop rapidly. Cooler temperatures returned quickly, though and the month as a whole was significantly cooler than the long term average. By April 30, only 23% of the wheat crop had headed, compared with 85% the previous year.

Figure 1. 2011-12 and 2012-13 Monthly growing season precipitation measured at the Northern Piedmont Center, Orange, VA

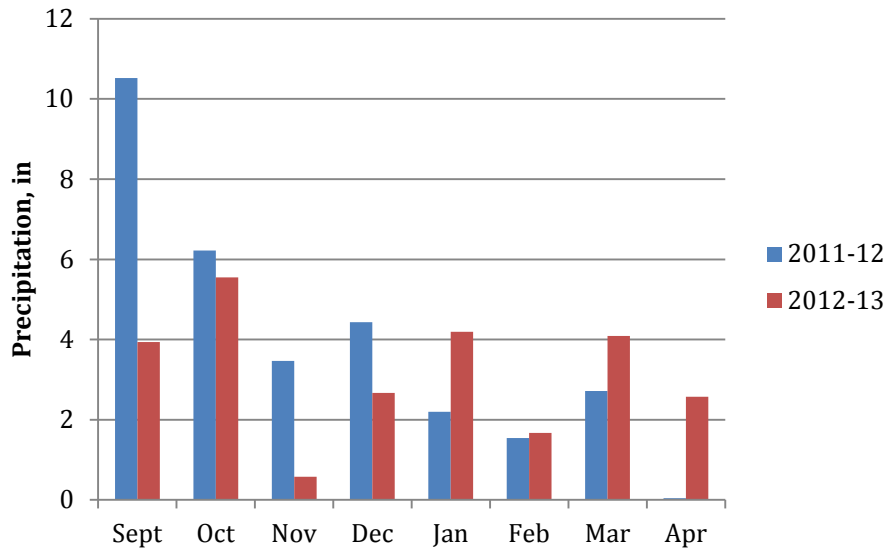
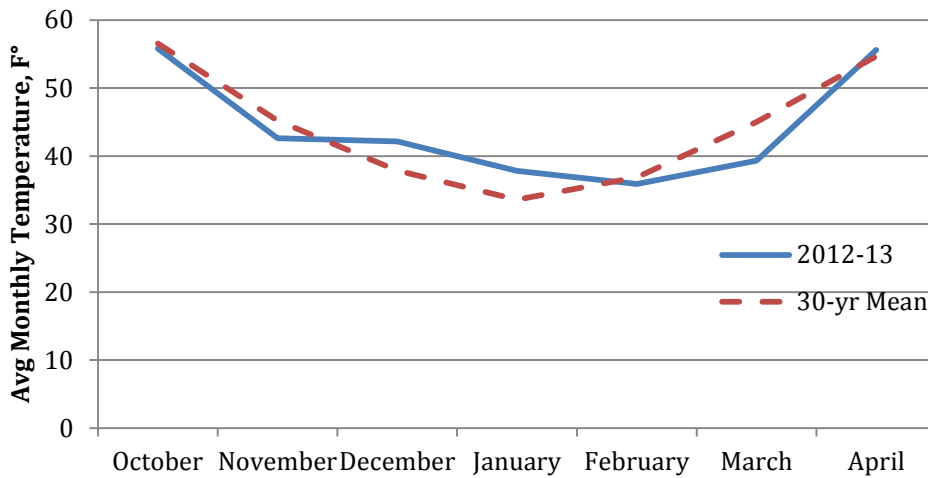


Figure 2. Monthly average growing season temperatures, 2012-13 and 30-yr mean, Orange, VA.



# 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 2012-2013, Boot Stage Harvest

Northern Piedmont AREC, Orange, Va 2012-13											
Boot Stage											
Cultivar	Species <sup>†</sup>	Harvest Date	Zadoks Maturity	Height (inches)	Lodging %	% Crude Protein	ADF %	NDF %	TDN %	35% DM Yield (tons/ac)	DM Yield (tons/ac)
Thoroughbred	B	4/22	52	28	0	13.10	33.41	59.63	60	5.51	1.93
Atlantic	B	4/15	51	27	0	14.57	33.99	59.31	60	4.73	1.66
Nomini	B	4/15	50	28	0	14.73	34.73	59.74	60	4.25	1.49
Wintergrazer 70	R	4/15	52	39	0	12.17	36.63	62.37	57	4.73	1.66
Grazemaster	R	4/15	49	32	0	14.65	35.09	61.45	59	4.70	1.65
Trical 141	T	5/1	49	36	0	10.98	38.42	65.09	55	7.76	2.72
Trical 815	T	5/1	54	31	0	10.03	35.61	59.86	57	7.07	2.47
Trical 336	T	5/1	53	32	0	10.72	34.79	60.01	58	6.55	2.29
154	T	4/22	50	29	0	11.04	34.87	59.32	58	6.33	2.21
08GX15	T	4/26	51	29	0	10.65	34.25	57.46	59	6.16	2.15
NCPT01-1433	T	4/26	51	28	0	12.06	33.01	56.89	60	5.59	1.96
Arcia	T	4/22	50	27	0	11.94	34.18	58.57	59	5.44	1.90
NCT07-1088	T	4/22	51	31	0	11.56	35.56	60.55	58	5.21	1.82
Trical 342	T	4/22	49	28	0	13.29	31.98	55.87	61	5.20	1.82
NCT08-26	T	4/22	51	27	0	12.99	33.99	58.40	60	5.07	1.77
Monarch	T	4/26	50	27	0	10.75	33.96	57.68	59	4.36	1.52
Featherstone 258	W	5/1	53	31	0	10.73	32.07	56.13	60	6.66	2.33
Jamestown	W	4/26	51	26	0	10.35	32.04	55.38	60	5.83	2.04
Merl	W	4/26	51	27	0	10.97	29.56	52.11	62	5.40	1.89
<b>LSD 0.05</b>						<b>1.66</b>	<b>2.12</b>	<b>3.03</b>	<b>2</b>	<b>0.77</b>	<b>0.27</b>

<sup>†</sup> B - Barley, R - Rye, T - Triticale, W - Wheat

Compared to 2012, forage yield over all entries was slightly higher (400 lb/ac) in 2013. Crude protein was almost 2 % lower and TDN was slightly lower compared to 2012. Overall, the triticale entries produced the most dry matter, followed by wheat. Rye and barley reached the boot stage much earlier than triticale or wheat entries which can be an important factor in deciding which to grow.