

Project Title: 2019 Spring Cereal Forage Trial

Objective: To evaluate the performance of spring-planted oat, barley, and triticale forage varieties in northwestern Montana

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Summary:

The spring cereal forage trial was planted on April 23, 2019, and managed under rainfed conditions. The trial included one triticale variety, 3 oat varieties, and 6 barley varieties. The triticale variety was later-maturing than the oat and barley varieties, and forage harvest took place a week after the rest of the varieties were harvested. Due in part to its large height advantage over barley and oat, Triticale 141 (triticale) was the highest-producing forage variety at 4.0 t/A. The lowest-producing varieties were MT16F02408 (barley) and Hayden (oat) at 2.9 t/A. Overall forage production averaged 3.2 t/A. Triticale 141 was the tallest variety (average of 126.4 cm), MT16F01601 (barley) was the shortest (54.4 cm), and the average height across all varieties was 75.5 cm. Grain yield averaged 75.9 bu/A. Otana (oat) had the highest grain yield at 115.2 bu/A, and Triticale 141 had the lowest at 53.4 bu/A. Grain protein was highest in MT16F02902 (barley) at 16.0 % and lowest in Triticale 141 (13.1%). Mean protein was 14.4%.

Seeding date:	4/23/2019	Field Location:	R4
Julian date:	112	Harvest date:	7/9 and 7/15/2019 (forage) 8/28/2019 (grain)
Seeding rate:	n/a	Julian date:	240
Previous crop:	Alfalfa	Soil type:	Silt loam
Herbicide:	Detonate: 5/23/19	Tillage:	Conventional
Insecticide:	None	Soil nutrient residual (lb/A):	26-6-146
Fungicide:	None	Nutrient fertilizer applied (lb/A):	84-45-100

Table 2. Agronomic performance of the Spring Cereal Forage Trial varieties

Variety	Cereal Type	Forage Yield (t/A)	Grain Yield (bu/A)	Height (cm)	Protein (%)	TWT (lb/bu)
Triticale 141	triticale	4.0	53.4	126.4	13.1	53.8
Otana	oat	3.5	115.2	92.3	14.1	40.5
Lavina	barley	3.2	71.2	56.5	15.4	48.8
MT16F02902	barley	3.2	62.2	60.0	16.0	49.8
MT16F01602	barley	3.2	64.3	56.7	13.6	49.4
Goliath	oat	3.2	91.3	97.7	13.9	41.5
MT16F02903	barley	3.0	61.1	65.0	15.6	50.6
MT16F01601	barley	3.0	69.4	54.4	14.7	51.2
MT16F02408	barley	2.9	69.8	61.2	14.6	50.9
Hayden	oat	2.9	100.7	85.3	13.3	42.0
Mean		3.2	75.9	75.5	14.4	47.9
LSD		0.5	11.9	6.0	0.5	0.7
CV%		8.1	8.90	4.60	2.10	0.87
Pr>F		0.002	<0.001	<0.001	<0.001	<0.001

TWT = test weight