

Project Title: 2020 Winter Cereal Forage Trial

Objective: To evaluate the performance of selected forage wheat and triticale in northwestern Montana

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Summary:

This trial was planted on a silt loam ground with known subsurface moisture recharge. Other management information is provided in Table 1.

The average forage yield (on a dry matter basis) was 9.6 t/A which was 20% more than last year. The FX 1001 triticale had the highest yield at 11.5 t/A and Ray wheat had the lowest, at 5.9 t/A (Table 2). Days to heading averaged 171 days, ranging from 167 days for MTF 20187 wheat to 178 days for Willow Creek wheat. The tallest variety was FX 1001 triticale at 73 inch and the shortest one was 47.4 inch Ray wheat. The FX 1001 also had the greatest relative feeding value (RFV) at 102%. On the other hand, MTF 20187 wheat had the lowest RFV of 81%. However, RFV values amongst all entries did not vary with each other (Table 2).

Grain yields averaged 121 bu/A and ranged from only 88 bu/A (Willow Creek wheat) to 155 bu/A (Ray wheat). Grain protein averaged 12.6% and ranged from 11.3% for Ray wheat to 13.7% Willow Creek wheat.

Table 1. Management information

Seeding date:	9/24/2019	Field Location:	Y2
Julian date:	267	Harvest date:	7/7 (forage) 8/26 (grain)
Seeding rate:	16 plants/ft ²	Julian date:	188 and 238
Previous crop:	Canola	Soil type:	Creston Silt loam
Herbicide:	5/5: Huskie	Tillage:	Conventional
Insecticide:	None	Soil residual nutrient (NO ₃ ⁻ , P, K lb/A):	60-12-260
Fungicide:	None	Nutrient fertilizer applied (N, P ₂ O ₅ , K ₂ O lb/A):	Pre-plant: 201-45-80 (10S) 4/10: Spring topdress 100-0-0

Table 2. Agronomic performance of wheat and triticale forage entries.

Species	Cultivar	Heading	Height	Forage			Grain	
				Moisture	RFV	Yield	Yield	Protein
		Julian	in	-----%-----		tons/ac	bu/ac	%
Triticale	FX 1001	169	73.0	65	102	11.5	123	12.7
Wheat	MTF 20188	168	57.1	65	93	10.3	127	12.7
Wheat	MTF 20189	169	59.3	67	94	10.0	114	13.1
Wheat	Willow Creek	178	63.5	66	93	9.9	88	13.7
Wheat	MTF 20186	174	57.0	67	90	9.3	122	12.3
Wheat	MTF 20187	167	50.7	65	81	8.9	118	12.3
Wheat	Ray	177	47.4	67	91	7.0	155	11.3
Mean		171	58.3	66.0	92	9.6	121	12.6
CV%		0.7	3.9	3.5	9.5	10.2	7.5	4.5
LSD 0.05		1.9	37	NS	NS	1.7	13.5	0.8
P-value (Cultivar)		<0.001	<0.001	NS	NS	<0.01	<0.001	<0.001

Height = height at forage harvest, NS = not significant, RFV = relative feed value

*Forage yield on a dry matter basis and grain yield at 13% moisture.