

Project Title: 2021 Spring Cereal Forage Variety Trial

Objective: To evaluate the performance of selected barley varieties in northwestern Montana

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Summary:

Ten forage varieties were planted in April 28, 2021 and managed under rainfed conditions. There was a total of 7.81 inches of rainfall received during the growing season. Eight of the varieties planted were barley, while one variety was triticale and another oat. Due to crop damage early in the growing season, the barley varieties had very low yields causing high variability in the data.

Forage biomass was harvested on July 7th and the overall average yield was 1.1 tons/A. There was not a significant effect of variety on forage biomass yield. Goliath oat was the highest grain yielding variety at 127 bu/A followed by Trical 141 triticale at 61.6 bu/A. All barley varieties had very low yields in this trial. The average protein percentage was 12.5%, with the highest value being 14.13% for Haymaker and the lowest at 10.18% for GOLIATH which also had the highest overall grain yield.

Table 1. Management information

| | | | |
|-----------------------|----------------------------|---|-----------------|
| Seeding date: | 4/28/2021 | Field Location: | Y1 |
| Julian date: | 118 | Harvest date: | 8/30/2021 |
| Seeding rate: | Variety Dependent | Julian date: | 242 |
| Previous crop: | Winter Wheat | Soil type: | Silty Clay Loam |
| Herbicide: | Dicamba 4 oz/A, 5/27/21 | Tillage: | Conventional |
| Insecticide: | None | Soil residual nutrient (NO3-1, P, K lb/A): | 92-20-292 |
| Fungicide: | None | Nutrient fertilizer applied (N, P2O5, K2O lb/A): | 50-30-50-10S |

Table 2. Agronomic performance of spring cereal forage

| Variety | Type | Forage Biomass (tons/A) | Grain Yield (bu/A) | Protein % |
|----------------|-----------|----------------------------|-----------------------|------------------|
| GOLIATH | Oat | 1.4 | 127.0 | 10.18 |
| TRICAL 141 | Triticale | 1.2 | 61.6 | 11.45 |
| HAYMAKER | Barley | 1.1 | 24.2 | 14.13 |
| MT18F00403 | Barley | 1.0 | 18.1 | 13.10 |
| MT18F00503 | Barley | 1.1 | 17.9 | 12.43 |
| MT16F02408 | Barley | 1.1 | 14.2 | 12.34 |
| MT16F02902 | Barley | 1.0 | 12.5 | 12.67 |
| LAVINA | Barley | 1.0 | 12.0 | 12.33 |
| MT16F02410 | Barley | 0.9 | 11.4 | 12.59 |
| MT18F01104 | Barley | 1.1 | 9.9 | 13.64 |
| Mean | | 1.1 | 30.9 | 12.5 |
| CV | | 16.3 | 31.4 | 3.9 |
| LSD | | – | 14.1 | 0.7 |
| PR>F | | 0.1259 | <0.001 | <0.001 |

Bolding denotes equal value to highest or earliest value within a column based on LSD(0.05)