

Project Title: 2023 Intrastate Spring Forage Barley Advanced Year Trial

Objective: To evaluate the agronomic performance of experimental winter forage lines grown in northwestern Montana.

Personnel: Jessica Torrion, Jamie Sherman, Joseph Jenson, David Larson

Summary:

There were 25 Forage Barley varieties planted on 26 April, 2023 and harvested on 7 September, 2023. Detailed cultural practices can be found in Table 1. It was managed under rainfall conditions receiving 5.8 inches of rain during the growing period.

Average yield was 18.1 Bu/A with MT20_F099_02 being the highest (76.5 bu/A) and Lavina the lowest (10.9 bu/A). Average dry matter production was 5.8 tons/A with MT17F02410 being the highest (7.3 tons/A) and MT20_F109_04 the lowest (4.4 tons/A). Average grain fill days was 28 days, MT16F01601 longest (35 days) and MT18F00607 the shortest (22 days). Average protein was 13.10, with MT20_F111_15 the highest average (14.51%) and MT20_F098_01 the lowest (11.91%).

Table 1. Management information

Seeding date:	4/26/2023 (116)	Field Location:	Y3
Seeding rate:	N/A	Forage harvest date:	7/5/2023 (186)
Previous crop:	Peas	Harvest date:	9/7/2023 (250)
Herbicide	Axial Bold, Cleansweep	Soil type:	Creston Silt Loam
Insecticide	N/A	Tillage:	Conventional
Fungicide	N/A	Soil residual nutrient (NO3-1, P, K lb/A):	140.5, 13, 117
		Nutrient fertilizer applied (N, P2O5, K2O lb/A):	25, 30, 90

Table 2. Agronomic performance

ID	GRNFILL (DAYS)	DM (TONS/A)	YLD (BU/A)	PRO (%)
MT20_F099_02	25	5.9	76.5	13.46
MT20_F110_17	28	5.9	30.8	12.93
MT20_F097_01	30	6.5	20.6	12.88
MT17F02410	24	7.3	19.7	12.90
MT19_F01_01	35	5.9	19.6	13.29
MT20_F108_13	25	6.1	19.1	12.79
MT20_F109_04	27	4.4	19.0	12.45
MT20_F109_08	27	6.7	18.8	12.50
Haymaker	28	6.9	17.9	12.92
MT20_F109_22	26	5.8	17.4	12.94
MT20_F111_15	29	6.5	17.1	14.51
MT20_F099_05	30	5.5	16.1	13.67
MT16F01601	305	4.7	14.5	14.02
MT20_F110_12	26	5.9	13.9	13.75
MT18F00607	22	5.2	13.7	12.35
MT20_F110_04	26	5.6	13.6	13.57
MT20_F098_24	28	5.8	13.3	12.45
MT Cowgirl	30	5.8	13.3	12.88
MT18F00503	29	4.8	12.7	13.26
MT18F00803	24	5.1	12.5	13.34
MT19_F04_02	29	5.9	12.1	13.23
MT20_F110_19	29	6.1	12.1	13.53
MT18F00507	25	5.5	11.5	12.91
MT20_F098_01	27	6.2	11.3	11.92
Lavina	28	4.7	11.0	12.95
MEAN	27.71	5.79	18.3	13.1
C.V.	5.4	16.5	19.8	4
LSD	2.61	1.49	4.6	0.78
P-VALUE	<0.001	0.08156	<0.001	<0.001

Bold= Highest, or earliest value within the column. GRNFILL= Grain fill DM= dry matter, YLD= yield, PRO= Protein.

