

Project Title: 2022 Spring Wheat Off-Station Trial

Objective: To evaluate the performance of selected spring wheat varieties in a production environment in northwestern Montana

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Summary:

The spring wheat off-station trial was planted on April 28th, 2022 (Table 1). A total of 3 inches of rainfall was received during the growing period. The trial was placed in an irrigated field near Polson, MT.

The average yield was 107.3 bu/A, with a high of 119.1 bu/A for Lannin/MT 1338 to a low of 89.1 bu/A for NS Presser CLP. The average test weight was 61.3 lb/bu. The highest test weight was 64.0 lb/bu for SY Soren and the lowest test weight was 56.6 lb/bu for NS Presser CLP. The average protein content was 14.9%. The highest protein content was 15.6% from VIDA and the lowest was 13.7% from WB Gunnison. Lodging was visible on all but seven varieties, ranging from slight to severe with the highest lodging percentage at 98% for MT1572/MT1133/CHOTEAU/YELLOWSTONE and VIDA (Table 2).

MONTANA

wheat & barley

Table 1. Management Information

Seeding date: 4/28/2022	Field Location: Polson
Julian date: 118	Harvest date: 8/25/2022
Tillage: Conventional	Julian date: 237
Previous crop: Spring Wheat	Soil type: McCollum fine sandy loam
Herbicide: Rezulant	Nutrient fertilizer applied 13-30-10-7S
	(N, P2O5, K2O lb/A): 180-0-0 Top Dress

Table 2. Agronomic performance of spring wheat

Variety/Line	HT (in)	LOD (%)	Yield (bu/A)	TWT (lb/bu)	PRO (%)	TKW (g)	FN (sec)
MT 2030	35.5	62	<u>119.1</u>	62.8	15.0	40.7	409
MT 1939	33.3	<u>0</u>	117.0	62.5	14.2	41.0	375
MT 2013	35.8	5	116.7	63.5	15.0	41.0	<u>416</u>
WB9879CLP	35.8	<u>0</u>	116.0	62.2	14.4	36.7	385
MT 2050	34.8	<u>0</u>	115.7	62.0	14.6	42.2	379
ND 695	<u>39.3</u>	7	115.4	61.7	15.3	38.1	358
BZ 92413R	34.8	<u>0</u>	115.2	61.9	13.7	43.8	377
AGRIPR 14	31.8	<u>0</u>	114.8	<u>64.0</u>	14.9	35.7	359
PI 633974	35.0	28	114.1	60.9	14.6	35.7	366
MT 2063	35.0	98	113.7	60.7	14.7	32.4	364
MT 2007	34.0	<u>0</u>	111.5	62.2	14.2	38.7	348
MT 2049	32.7	8	110.9	61.4	15.2	41.9	355
PI 690450	36.1	97	110.2	61.5	15.3	40.0	363
MT 2054	39.1	38	107.7	61.0	14.7	<u>48.5</u>	357
MT 2038	37.0	88	106.0	61.4	15.4	41.4	380
PI 660981	34.9	38	105.1	60.6	14.9	38.3	357
PI 676978	34.3	33	104.3	62.5	15.5	40.8	357
MT 1809	36.7	95	104.0	59.7	15.4	35.1	348
AGRIPR141	30.6	<u>0</u>	102.2	62.9	14.8	36.6	354
MT 2022	34.3	96	99.0	60.9	15.0	40.1	383
BZ 996434	36.6	88	94.1	60.2	14.9	42.2	368
AGRIPR 10	30.8	<u>0</u>	94.0	62.2	15.0	39.2	376
PI 642366	36.4	98	93.9	58.1	<u>15.6</u>	32.9	348
MT 1716	34.2	95	92.5	60.0	14.7	28.4	357
PI 679964	37.8	87	89.1	56.6	14.5	34.4	335
Mean	35.1	42	107.3	61.3	14.9	38.6	367
C.V.	3.6	49.2	7.3	1.8	1.9	4.5	3.3
LSD(0.05)	1.9	35	11.5	1.4	0.5	2.6	19
PR>F	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Bold = top performer, **Bolding** denotes equal value to highest or earliest value within a column based on LSD(0.05)

HT= height, LOD=lodging, YLD= yield, PRO= protein, TWT= test weight, TKW= thousand kernel weight