

Project Title: 2019 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 off-station spring wheat trial was planted on April 22, 2019 under dryland conditions. See Table 1 for detailed management information.

Yields ranged from 62.5 bu/A (LIMAGR143) to 42.1 bu/A (AGRIPR10), with an overall average of 54.3 bu/A (Table 2). Average test weight was 61.8 lb/bu. MT1673 had the lowest test weight of 60.3 lb/bu and AGRIPR141 had the highest at 63.0 lb/bu. PI 671855 had the highest protein content (16.7%) and PI 679964 had the lowest (13.7%), while the average protein level across the study was 14.9%. Falling numbers ranged from 463.9 seconds (PI 671855, which also had the highest protein content) to 368.8 seconds (PI 642366), with an average of 407.5 seconds.

From seeding to harvest, this nursery received 4.9 inches of rain.

Table 1. Management information

Seeding date:	4/22/2019	Field Location:	R4
Julian date:	111	Harvest date:	8/30/19
Seeding rate:	24 plants/ft ²	Julian date:	242
Previous crop:	Alfalfa	Soil type:	Fine sandy loam
Herbicide:	Huskie/Axial: 5/23 Stinger: 6/10	Tillage:	Conventional
Insecticide:	None	Soil residual nutrient (NO ₃ ⁻¹ , P, K lb/A):	26-6-146
Fungicide:	None	Nutrient fertilizer applied (N, P ₂ O ₅ , K ₂ O lb/A):	84-45-100

Table 2. Agronomic performance of the Off-Station spring wheat

ID/ Name	Cultivar/ Pedigree	Yield bu/A	TWT lb/bu	Protein %	HDDT Julian	Height in.	Rust %	FN sec.	TKW g.
LIMAGR143	LCS Pro	62.5	62.7	14.5	170	30.6	6.0	377.8	39.8
WSCIA	ALUM	61.6	62.9	14.3	174	29.0	1.0	416.8	40.1
MT 1621	MT1148/MT1133	61.1	62.1	14.7	169	26.9	7.7	405.0	40.9
PI660981	DUCLAIR	61.0	61.3	14.6	170	29.8	2.0	393.2	34.5
PI 676978	LANNING	59.5	62.2	15.4	170	26.0	2.0	391.8	37.2
MT 1716	MT1274/RB07	59.1	61.5	14.6	170	27.8	16.7	406.8	29.1
PI633974	CHOTEAU	58.9	61.2	14.6	171	26.7	6.7	387.2	35.8
MT 1767	12SR225/12F5 827	58.7	60.5	14.5	169	27.3	9.3	390.2	34.8
MT 1673	Duclair x McNeal/Glupro, +, fam 72-17	56.8	60.3	15.6	169	28.1	0.0	397.2	33.4
PI642366	VIDA	54.3	61.6	14.2	176	27.0	3.0	368.8	35.4
PI 679964	NS PRESSER CLP	53.1	61.4	13.7	176	28.3	36.7	392.2	34.3
BZ996434	CORBIN	52.7	62.4	14.2	169	28.1	9.3	391.5	39.5
CI 13596	Fortuna	52.1	61.2	14.8	172	32.1	5.3	399.3	39.0
BZ92413R	WB GUNNISON	51.6	62.6	14.1	174	26.6	8.3	437.0	42.9
WB9879CLP	WB9879CLP	49.7	61.1	14.9	172	25.9	5.3	417.5	34.8
AGRIPR141	SY INGMAR	49.5	63.0	16.3	172	27.1	1.0	451.6	34.5
ND 695	REEDER	49.2	62.7	14.1	175	27.3	3.0	392.5	36.2
PI 671855	EGAN	46.4	60.9	16.7	175	28.6	0.0	463.9	36.3
AGRIPR14	SY SOREN	45.6	62.2	16.1	170	24.4	7.7	429.4	32.6
AGRIPR10	BRENNAN	42.1	62.1	15.7	169	23.5	5.3	439.2	35.2
	MEAN	54.3	61.8	14.9	171.6	27.6	6.8	407.5	36.3
	LSD (0.05)	9.9	0.4	0.3	2.3	3.2	10.4	21.6	2.3
	CV%	11.1	0.4	1.3	0.8	7.0	92.7	3.2	3.8
	Pr>F	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

TWT = test weight, HDDT = heading date, TKW = thousand kernel weight, FN = falling number