

Project Title: 2020 Spring Wheat Off-Station Trial

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

Personnel: J.A. Torrion, Amanda Shine, Eeusha Nafi, Hwa-young Heo, Jason Cook

Summary:

The off-station spring wheat trial was planted on April 22, 2020, and irrigated with 2.75 inches. See Table 1 for detailed management information.

Yields ranged from 124.8 (Corbin) to 155.9 (Duclair) bu/A, with an overall average of 142.9 bu/A (Table 2). The average test weight was 62.5 lb/bu. MT1053/MO8/3-4 had the lowest test weight whereas, SY Ingmar being the highest. The average protein content was at 14%. The NS Presser CLP had the highest protein content (15.8%), whereas WB Gunnison and MT1274/RB07 had the lowest protein (12.9%). Fortuna was the tallest plant (45 in.), whereas both SY Soren and Brennan were the shortest (34 in.). The average falling number (FN) for this trial was 430 seconds. Both Duclair and Alum had the fastest FN (both 371 sec.). The slowest FN was the NS Presser CLP (511 sec), which also had the highest protein content amongst the cultivars tested.

From seeding to harvest, this nursery received 9.7 inches of rain.

Table 1. Management information

Seeding date:	4/22/2020	Field Location:	R5
Julian date:	113	Harvest date:	8/26/20
Seeding rate:	-	Julian date:	239
Previous crop:	Alfalfa	Soil type:	Fine sandy loam
Herbicide:	Axial/Cleansweep (6/1)	Tillage:	Conventional
Insecticide:	None	Soil residual nutrient (NO ₃ ⁻¹ , P, K, lb/A):	124-8-220
Fungicide:	None	Nutrient fertilizer applied (N, P ₂ O ₅ , K ₂ O, lb/A):	94-15-80-10(S)

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

Cultivar/Line	Yield bu/A	TWT lb/bu	Protein %	HDDT Julian	Height in.	Rust %	FN sec.	TKW g.
DUCLAIR	155.9	61.8	13.9	181	35	1	371	37.8
DAGMAR	155.7	63.0	14.6	181	38	0	446	44.7
ALUM	153.6	62.8	13.5	184	37	0	371	39.2
WB9879CLP	153.4	62.6	13.8	182	39	1	467	34.4
MT1053/MO8/3-4	149.9	61.1	13.9	186	42	1	415	37.7
LANNING	149.3	62.4	13.7	180	37	0	435	38.9
LCS PRO	148.8	63.1	13.8	181	42	1	395	43.7
VIDA	146.0	61.9	13.6	181	38	0	406	37.4
CHOTEAU	144.9	61.9	13.7	182	37	0	400	35.8
EGAN	144.2	62.0	15.7	184	39	0	503	38.4
SY SOREN	142.1	63.4	14.0	181	34	0	408	33.6
REEDER	139.9	62.7	14.3	181	42	0	436	38.4
MT1274/RB07	139.7	62.8	12.9	181	38	1	431	29.6
NS PRESSER CLP	139.7	62.1	15.8	184	39	0	511	37.1
SY INGMAR	139.2	63.6	14.0	183	36	0	414	34.1
WB GUNNISON	138.1	62.3	12.9	182	37	3	442	43.1
BRENNAN	135.4	63.7	14.2	181	34	0	456	36.2
Vida*4/Conan	131.7	61.4	14.1	182	41	0	429	37.2
FORTUNA	126.4	62.6	13.6	183	45	0	427	38.4
CORBIN	124.8	62.0	14.0	181	38	0	427	40.5
Mean	142.9	62.5	14.0	182	38.4	0.4	429.5	37.9
LSD (0.05)	13.4	0.7	0.5	2	2.2	1.2	22.5	2.3
CV%	5.7	0.7	2	0.7	3.5	172.4	3.2	3.8
Pr>F	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001

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