

Project Title: 2021 Winter Wheat Off-Station Trial

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

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Summary:

The off-station winter wheat trial was planted on September 28th, 2020 and managed under rainfed conditions (Table 1).

Yields ranged from 115.2 bu/A for StandClear CLP to 161.3 bu/A for LCS Jet, with an overall average of 135.0 bu/A. The average test weight was 60.4 lb/bu. Ray had the lowest test weight at 56.8 lb/bu while AAC Wildfire had the highest at 61.4 lb/bu. The average protein content was 11.50% with the lowest being 10.70% for MTS1831 and the highest at 12.44% for Brawl CL Plus. The average winter survival was 95.6% of the plot, with SY Monument, Judee, and Loma having the highest survival of 98% and MTS1855 and AAC Wildfire having the lowest survival of 92%. The average time for falling numbers was 404.8 seconds, with the fastest variety being Warhorse at 453.0 seconds, and MT1872 being the slowest at 344.1 seconds (Table 2).



Table 1. Management information

Seeding date: 9/28/2020	Field Location: Y6
Julian date: 264	Harvest date: 8/13/2021
Seeding rate:	Julian date: 225
Previous crop: Canola	Soil type: Silty Clay Loam
Axial Bold &	
Herbicide: Cleansweep M	Tillage: Conventional
5/6/21	
Insecticide: None	Soil residual nutrient Fall 2020,
	(NO3-1, P, K lb/A): 10-60-50-15S
Fungicide: None	Nutrient fertilizer applied Spring 2021,
	(N, P2O5, K2O lb/A): 150-0-0

Table 2. Agronomic performance of winter wheat varieties

Variety	Survival %	HD (Julian)	HT (in)	YLD (bu/A)	PRO %	TWT (lb/bu)	FN (sec)
LCS Jet	95	163	30.0	161.3	11.36	58.8	385.5
Loma	98	170	35.5	158.5	11.81	61.2	352.2
FourOsix	95	166	33.4	148.8	11.22	60.5	423.9
Byrd CL Plus	95	163	34.7	147.0	10.76	60.2	365.8
Keldin	96	165	32.5	146.9	11.58	60.8	423.7
MTCL1737	94	169	32.6	142.9	11.77	60.6	412.3
SY Monument	98	163	32.5	142.0	11.69	59.9	395.3
Warhorse	97	167	36.0	140.1	12.22	60.7	453.0
Yellowstone	97	164	35.3	140.0	11.41	60.2	426.2
MTS18149	93	169	32.0	137.6	11.38	60.8	367.8
MT1745	94	167	31.8	137.3	11.06	60.6	431.1
Northern	93	168	34.7	136.9	11.38	61.1	429.1
Flathead	97	159	30.3	136.4	11.58	61.0	415.6
SY Clearstone 2CL	96	165	35.6	136.3	11.29	59.8	433.2
Ray	96	166	39.0	133.6	11.65	56.8	428.4
MT1872	97	166	32.7	129.5	11.92	59.1	344.1
MTS18116	95	169	30.2	129.5	11.10	60.8	392.1
AAC Wildfire	92	168	35.7	129.0	11.67	61.4	402.3
MTS1831	93	170	28.6	127.4	10.70	60.8	344.2
MTCS20156	97	168	31.1	127.2	11.90	61.3	428.7
Brawl CL Plus	97	159	30.9	119.9	12.44	61.0	404.9
Bobcat	94	166	31.8	118.1	11.93	59.7	422.7
MTS1855	92	166	32.8	117.9	11.22	61.3	417.2
Judee	98	165	32.2	116.9	11.50	60.4	389.3
StandClear CLP	97	165	33.6	115.2	11.71	61.2	431.9
Average	95.6	166	33.0	135.0	11.5	60.4	404.8
LSD (0.05)	2.8	2.3	2.0	14.6	0.7	0.9	35.5
C.V. (%)	1.8	0.9	3.6	6.0	3.3	0.8	4.7
PR>F	0.0003	<.0001	<.0001	<.0001	0.0013	<.0001	<.0001

Bolding indicates varieties with values equal to highest variety based on LSD (p =0.05)

HD = heading date, HT = height, YLD = yield, PRO = protein, TWT = test weight, FN = falling number