

Project Title: Evaluation of spring wheat varieties under dryland conditions at four off-station sites

Personnel: Chengci Chen, Calla Kowatch Carlson, and Thomas Gross

Summary: Due to the dry soil condition at planting in 2020, we were not able to plant the Valley County site at Nashua, MT. The Wibaux County site had very bad weed infestation in half of the experimental plots, therefore, the yield data are not reported here.

Table 1. Roosevelt County dryland spring wheat variety trial at Poplar, MT 2020

Variety	Plant Height in	Test Weight† lb/bu	Protein %	GrainYield† bu/a
Brennan	26.7	66.2	16.1	57.8
Choteau	30.5	64.8	15.6	65.1
CP3099A	34.4	61.0	12.5	58.4
CP3530	32.8	65.0	15.4	68.0
CP3903	30.4	66.4	15.4	60.3
CP3910	29.6	66.3	15.6	70.3
CP3915	29.1	66.3	15.4	64.2
Dagmar	29.9	65.3	16.4	66.7
Duclair	29.3	64.5	14.9	65.6
Egan	30.3	63.6	16.5	62.6
Lanning	29.6	65.0	16.9	70.4
Longmire	29.6	65.7	15.7	66.0
MT 1716	31.5	66.0	15.3	70.1
MT 1855	33.5	64.7	15.5	64.3
MT 1866	31.9	65.3	15.3	71.5
NS Presser CLP	33.2	63.4	16.4	62.8
Reeder	31.8	65.7	15.8	69.2
SY Ingmar	29.0	65.9	16.1	61.2
SY Soren	28.5	65.9	16.2	63.3
Vida	31.7	64.4	15.5	72.0
XY McCloud	30.2	66.5	15.9	60.5
XY Rockford	31.2	64.0	15.8	65.2
Mean	30.7	65.1	15.6	65.2
P-Value	<0.0001	<0.0001	<0.0001	<0.0001
CV (%)	5.1	0.7	1.5	5.2
LSD (0.05)	2.6	0.7	0.4	5.6

†Grain yield and test weight were adjusted to 12.0% moisture.

Field Management

Previous crop:	Pea	Soil residual nitrate:	21 lb NO ₃ -N/a
Seeding date:	4/29/2020	Soil test P ₂ O ₅	21.3 ppm
Season precipitation:	7.72 in	Nutrient fertilizer applied (N, P ₂ O ₅ , K ₂ O; lb/A):	63-19-0
Harvest date:	8/25/2020	Additional fertilizer:	MESZ @ 80 lb/a 10-40-0-10(S)-(Zn)

Table 2. Sheridan County dryland spring wheat variety trial at Dagmar, MT 2020

Variety	Plant Height in	Test Weight [†] lb/bu	Protein %	Grain Yield [†] bu/a
Brennan	24.8	66.2	16.9	53.3
Choteau	28.7	65.2	15.8	62.9
CP3099A	31.1	61.5	12.3	53.9
CP3530	31.0	65.4	16.0	62.9
CP3903	28.6	66.7	15.9	62.2
CP3910	25.3	67.5	15.7	64.2
CP3915	27.6	67.0	16.0	66.3
Dagmar	27.7	66.0	16.6	63.4
Duclair	27.5	65.0	15.1	64.1
Egan	28.2	63.7	16.4	57.6
Lanning	28.3	65.0	17.3	65.3
Longmire	28.5	66.8	15.9	65.6
MT 1716	28.0	66.8	15.0	67.2
MT 1855	31.5	65.7	15.2	63.2
MT 1866	28.5	66.1	15.3	70.4
NS Presser CLP	27.6	63.8	16.2	59.0
Reeder	30.2	66.1	15.9	68.0
SY Ingmar	27.0	67.3	16.1	62.9
SY Soren	25.7	66.5	17.2	58.2
VIDA	28.5	65.8	15.1	70.4
XY McCloud	27.8	66.6	16.9	53.5
XY Rockford	29.1	65.1	15.4	61.4
Mean	28.2	65.7	15.8	62.5
P-Value	<0.0001	<0.0001	<0.0001	<0.0001
CV (%)	4.4	0.4	1.6	5.6
LSD (0.05)	2.0	0.4	0.4	5.7

[†]Grain yield and test weight were adjusted to 12.0% moisture.

Field Management

Previous crop:	Lentil	Soil residual nitrate:	21 lb NO ₃ -N/a
Seeding date:	4/30/2020	Soil test P ₂ O ₅	21.3 ppm
Season precipitation:	5.68 in	Nutrient fertilizer applied (N, P ₂ O ₅ , K ₂ O; lb/A):	63-19-0
Harvest date:	8/31/2020	-	