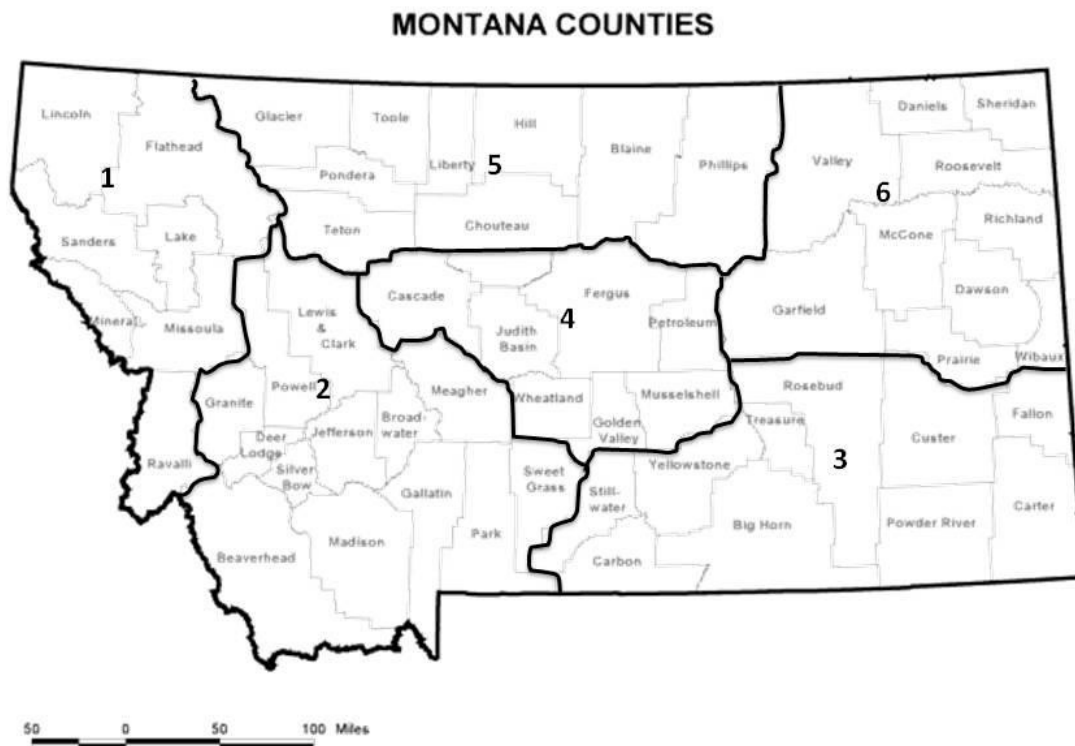


2022 Montana Spring Wheat Variety Performance Evaluations



SPRING WHEAT VARIETY PERFORMANCE SUMMARY IN MONTANA

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INTRODUCTION

The agronomic characteristics of spring wheat varieties evaluated by the Montana Agricultural Experiment Station are compared in this publication with other varieties commonly grown in the state. The objective of this summary is to help farmers select the varieties which will perform best in their area. Data from 2019-2022 is provided for each of the testing sites. Data for varieties grown in previous years can be found on this website:

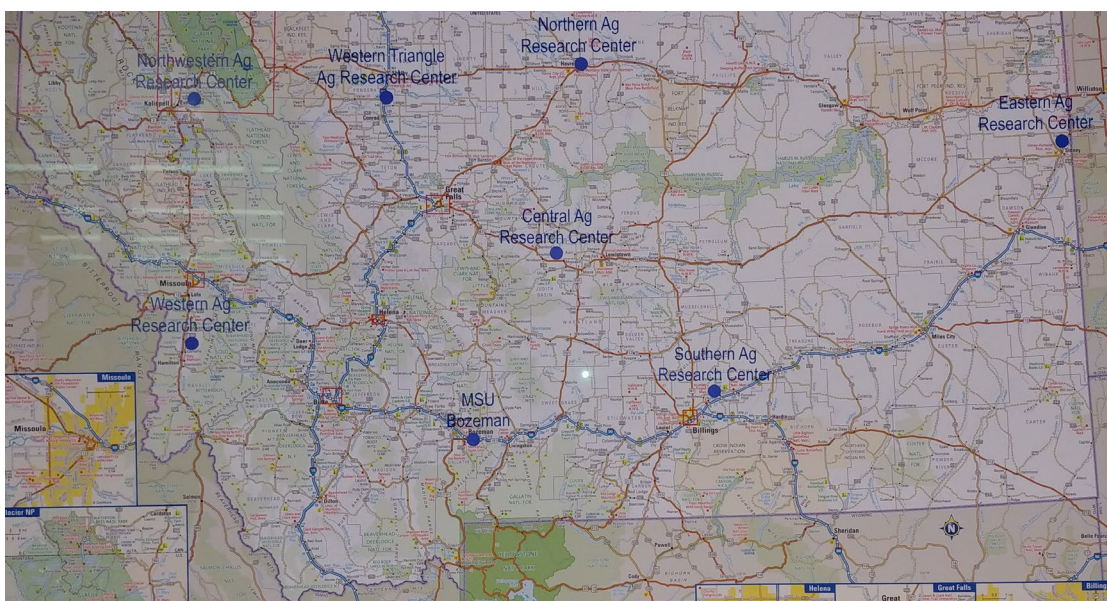
<http://plantsciences.montana.edu/crops/index.html>.

The map on the cover shows the districts in the state for purposes of reference for specific areas of adaptation. A brief description is given which may include a variety's particular advantages or disadvantages. The information was extracted from data collected and analyzed from the Advanced Spring Wheat nursery. These reports are prepared by research personnel of the Montana Agricultural Experiment Station.

VARIETY TESTING PROCEDURES

Locations

Typically, the Advanced Spring Wheat nursery is planted at 9 Montana sites; including Kalispell (NWARC : high rainfall), Bozeman (dryland), Huntley (SARC : dryland), Moccasin (CARC : dryland), Conrad (WTARC : dryland), Havre (NARC : dryland), Fort Benton, and Sidney (EARC :dryland and irrigated).



Experimental Design and Data Collection

Varieties, currently recommended, widely grown, or recently released are evaluated for agronomic performance in the Advanced Spring Wheat nursery. Also evaluated in these nurseries are experimental breeding lines tested against the check varieties

Agronomic data collected throughout the growing season includes heading date, plant height, lodging, disease and insect reactions. Experimental plots are trimmed, measured and harvested with small plot combines. The grain is weighed for yield and test weight.

One trait important to wheat growers is resistance to the wheat stem sawfly. The major mode of resistance is a solid versus hollow stemmed variety. To evaluate this trait we cut several stems of each variety and score them on a scale of 1=hollow, 2=2/5 solid, 3=3/5 solid, 4=4/5 solid and 5=solid. The cuts are made in the center of each internode, so there are 5 scores per stem. The five scores are added up to get a total number ranging from 5=very hollow up to 25=very solid.

Entries are submitted to the Cereal Quality Lab at MSU, Bozeman for protein, milling, baking and Asian noodle quality evaluation as needed.

Data is analyzed and summarized for each location and overall comparisons are made to determine which varieties and/or experimental lines look promising for Montana producers. When sufficient data is collected and analyzed, promising experimental lines are submitted to the MAES wheat variety release committee.

**2019-2022 OVERALL AVERAGE OF GRAIN YIELD, TEST WEIGHT AND PROTEIN CONTENT FOR THE ADVANCED
SPRING WHEAT NURSERY GROWN UNDER RAIN-FED CONDITION (BOZEMAN, HUNTLEY, MOCCASIN, CONRAD,
HAVRE, FORT BENTON, SIDNEY-DRY)**

ID	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2019- 2022	2020- 2022	2021- 2022	2022	2019- 2022	2020- 2022	2021- 2022	2022	2019- 2022	2020- 2022	2021- 2022	2022
MT 1809	58.8	55.3	45.1	50.6	59.4	58.9	57.8	58.0	14.8	15.5	15.5	15.2
DAGMAR	57.7	54.0	46.1	49.7	60.9	60.2	59.3	59.3	15.1	15.7	15.9	15.6
VIDA	56.6	53.9	44.6	49.2	59.9	59.1	58.4	58.3	14.3	14.9	14.8	14.6
NS PRESSER CLP	56.0	53.6	44.1	47.4	59.0	58.0	57.5	57.5	14.4	15.3	15.1	14.7
SY ROCKFORD	55.0	50.8	42.2	44.8	59.2	58.3	57.0	58.8	14.7	15.3	15.5	15.2
WB 9719	54.7	50.6	41.2	44.2	62.8	61.2	60.2	60.7	14.4	15.2	15.4	15.6
LANNING	53.4	50.1	43.1	46.4	60.0	59.2	57.9	58.9	15.2	15.9	15.7	15.7
WB 9879 CLP	53.4	49.4	41.7	43.8	60.0	59.5	58.3	59.0	15.2	15.8	15.9	15.8
MT SIDNEY	53.1	50.8	42.3	43.8	60.6	59.9	58.5	59.9	14.9	15.4	15.5	15.3
CHOTEAU	52.0	49.5	41.3	45.5	59.7	59.2	58.2	58.5	14.9	15.6	15.6	15.4
DUCLAIR	51.8	50.4	41.1	45.6	59.4	58.7	57.3	58.5	15.0	15.3	15.5	15.1
REEDER	51.5	48.7	41.4	43.9	60.5	59.8	58.8	58.9	14.9	15.5	15.5	15.4
SY Longmire	51.4	48.4	40.1	41.6	61.0	60.2	59.1	59.6	15.0	15.7	15.9	15.9
WB GUNNISON	51.4	47.7	40.6	43.6	60.8	59.9	58.8	59.0	14.2	14.8	15.0	14.7
SY INGMAR	51.3	47.1	39.0	40.2	60.7	59.4	58.4	60.0	15.4	16.1	16.3	16.0
CORBIN	50.6	46.5	39.7	42.0	60.6	60.1	59.0	59.1	14.9	15.4	15.6	15.5
SY 611 CL2	50.3	46.7	39.6	42.3	61.5	59.4	58.6	60.0	15.0	15.6	15.7	15.6
MCNEAL	49.1	47.5	37.9	43.1	59.4	58.7	57.7	58.1	14.7	15.6	15.6	15.4
MT 1939		55.6	48.4	50.1		59.8	58.5	59.4		15.0	15.1	14.8
MS Ranchero		49.4	42.6	46.4		59.3	58.2	58.9		14.9	15.0	14.6
MT 2049			46.7	49.0			57.7	58.2			15.3	15.1
MT 2030			46.0	51.2			58.9	59.4			15.2	15.1
ROCKER			44.9	50.2			59.6	59.6			15.4	15.1
MT 2054			44.8	46.4			59.2	59.3			15.3	15.1
MT 2063			44.8	49.0			58.2	59.3			15.1	14.7
MT 2007			44.8	48.7			59.0	59.5			15.2	14.8
MT 2050			44.7	48.7			58.3	58.7			15.2	14.8
LCS Ascent			44.1	47.9			60.4	60.6			15.0	14.5
MT 2022			43.9	46.9			59.8	60.2			15.3	14.9
MT 2038			43.6	46.1			58.8	59.5			16.1	15.6
WB 9516			43.4	44.9			59.9	59.4			14.9	15.0
MS Cobra			39.7	44.6			59.2	59.5			15.7	15.3
MT 2013			39.0	43.8			58.9	59.8			15.7	15.3
AP Gunsmoke CL2			39.0	41.0			58.0	58.5			16.8	16.7
AAC Concord			38.8	41.4			58.0	58.6			15.9	15.8
AP Smith			38.1	40.7			58.0	59.4			16.1	15.8
THATCHER			31.7	33.2			55.1	57.6			16.0	15.9
LCS HammerAX				45.9				59.4				14.7
LCS Dual				45.4				59.5				14.9
WB 9929				45.3				56.7				15.8
ND HERON				44.1				60.9				15.6
WB 9668				41.2				59.2				16.5
MEAN	53.2	50.3	42.2	45.6	60.3	59.4	58.5	59.1	14.8	15.4	15.5	15.4
C.V.	5.4	5.9	7.4	7.9	0.7	1.3	2.0	1.3	2.1	2.0	2.7	3.4
F-VALUE (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	3.6	3.4	3.3	4.5	0.5	0.9	1.2	1.1	0.4	0.4	0.4	0.6

1) **bold** : highest or earliest value within a column, **bold** : equal value to highest or earliest value within a column based LSD(0.05)

2) Huntley's 2019 and 2022 data was excluded and no heading data for 2021

3) Conrad's 2020 and 2022 data was excluded and no heading data for 2021, 4) no heading data for 2022, 5) no data for Fort Benton at 2019

**2019-2022 OVERALL AVERAGE OF GRAIN YIELD, TEST WEIGHT AND PROTEIN CONTENT FOR THE ADVANCED SPRING
WHEAT NURSERY GROWN UNDER IRRI / HIGH RAINFALL CONDITION (KALISPELL, SIDNEY-IRRI)**

ID	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2019- 2022	2020- 2022	2021- 2022	2022	2019- 2022	2020- 2022	2021- 2022	2022	2019- 2022	2020- 2022	2021- 2022	2022
MT SIDNEY	82.6	82.6	86.3	81.9	62.8	64.4	63.3	64.7	13.5	14.3	12.5	12.4
MT 1809	82.6	87.3	84.2	81.7	61.5	63.0	61.9	62.7	13.5	14.5	12.4	12.6
SY Longmire	82.5	87.0	84.8	86.6	63.1	64.1	63.2	64.5	13.4	14.3	12.4	12.4
SY ROCKFORD	82.1	84.0	85.6	85.4	61.2	63.1	61.8	63.2	13.5	14.2	12.7	12.5
SY 611 CL2	82.0	86.4	81.2	81.9	63.3	64.2	63.2	64.4	13.4	14.5	12.5	12.6
NS PRESSER CLP	81.7	82.3	84.3	76.2	61.5	62.4	61.9	62.3	12.9	13.9	12.1	12.0
DAGMAR	81.3	86.0	83.8	88.7	62.4	63.9	62.9	64.3	13.7	15.1	12.7	12.6
DUCLAIR	80.6	80.0	84.4	91.6	61.4	62.4	61.7	63.2	13.2	14.4	12.4	12.2
VIDA	79.5	84.4	80.4	75.7	62.1	63.3	62.5	63.4	13.0	14.1	12.1	12.1
WB 9719	79.3	86.5	83.8	83.4	64.9	66.2	65.2	66.3	13.2	14.1	12.2	12.0
SY INGMAR	78.7	84.0	79.4	82.8	63.2	64.5	63.5	64.9	14.0	14.6	12.9	12.7
LANNING	77.8	82.7	77.7	77.0	61.6	62.3	61.6	63.2	14.1	15.3	13.1	12.9
REEDER	77.6	82.8	79.3	74.4	62.7	63.6	63.0	63.9	13.6	14.7	12.8	12.6
CORBIN	75.5	75.6	78.1	78.8	62.4	63.8	62.7	63.8	13.3	14.8	12.4	12.1
WB GUNNISON	75.2	77.1	79.1	77.3	62.6	63.9	62.9	63.5	13.0	13.9	12.2	12.2
MCNEAL	74.6	76.7	75.4	74.4	61.6	62.4	61.9	63.3	13.7	15.0	12.9	12.5
WB 9879 CLP	73.8	78.7	78.1	82.0	61.9	63.6	62.7	64.3	13.6	14.5	12.4	11.9
CHOTEAU	73.6	78.9	78.1	82.1	61.7	63.0	62.3	63.7	13.4	14.7	12.3	12.2
MS Ranchero		86.7	85.7	87.2		63.4	62.1	63.6		13.8	12.1	12.1
MT 1939		84.7	89.7	91.1		63.2	62.3	64.0		14.2	12.5	12.2
WB 9516			90.2	86.5			64.0	64.7			12.4	11.6
MT 2063			89.7	85.9			63.0	64.3			11.6	11.3
MT 2030			87.6	88.5			61.9	63.3			12.7	12.5
LCS Ascent			86.5	87.2			63.5	64.9			11.9	12.0
MT 2049			86.5	78.1			61.5	62.6			13.1	12.7
MT 2013			86.2	79.9			63.2	64.6			13.0	12.3
ROCKER			85.6	86.4			63.1	64.0			12.3	12.2
MT 2038			83.5	82.1			61.7	63.1			13.4	13.1
MT 2050			83.5	86.5			62.1	63.4			12.8	12.6
MS Cobra			82.5	81.9			63.1	64.3			13.2	12.6
AP Smith			82.1	81.6			62.9	64.2			13.3	12.8
AP Gunsmoke CL2			81.7	86.6			62.2	63.6			12.8	13.1
MT 2022			81.4	83.2			63.0	64.5			12.4	12.2
MT 2007			78.7	75.4			62.6	63.7			12.3	12.3
MT 2054			76.1	80.1			62.4	63.4			12.7	12.8
AAC Concord			72.2	77.1			62.0	63.3			13.2	13.2
THATCHER			68.4	65.5			61.8	63.2			13.1	12.6
LCS HammerAX				98.6				63.8				12.0
LCS Dual				91.3				64.3				11.7
WB 9929				84.0				62.6				12.3
ND HERON				79.2				65.2				12.9
WB 9668				77.8				64.2				13.0
MEAN	78.9	82.7	82.2	82.4	62.3	63.5	62.6	63.8	13.4	14.4	12.6	12.5
C.V.	5.1	6.1	5.5	7.3	0.5	1.1	0.7	0.6	2.3	2.8	3.2	2.3
F-VALUE (ENTRY)	ns	ns	<0.01	<0.05	<0.001	<0.001	<0.001	<0.001	ns	<0.01	<0.05	<0.001
LSD(0.05)	-	-	9.1	12.0	0.7	1.2	0.9	0.7	-	0.7	0.8	0.6

1)**bold** : highest or earliest value within a column, bold : equal value to highest or earliest value within a column based LSD(0.05)

2) Kalispell's 2020 data was excluded and no heading data for 2022

**2019-2022 OVERALL AVERAGE OF GRAIN YIELD, TEST WEIGHT AND PROTEIN CONTENT
FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA (COMBINED)
(Kalispell, Bozeman, Huntley, Moccasin, Conrad, Havre, Fort Benton, Sidney-dry, and Sidney-irri)**

ID	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2019- 2022	2020- 2022	2021- 2022	2022	2019- 2022	2020- 2022	2021- 2022	2022	2019- 2022	2020- 2022	2021- 2022	2022
MT 1809	65.6	59.9	53.8	59.5	60.0	59.5	58.7	59.5	14.4	15.4	14.8	14.5
DAGMAR	64.4	58.6	54.5	60.8	61.3	60.8	60.1	60.9	14.7	15.6	15.2	14.7
NS PRESSER CLP	63.4	57.7	53.0	55.6	59.7	58.7	58.5	59.1	14.0	15.1	14.4	13.9
VIDA	63.1	58.2	52.6	56.8	60.5	59.7	59.3	60.0	13.9	14.8	14.2	13.9
SY ROCKFORD	62.8	55.6	51.9	56.4	59.8	59.0	58.0	60.2	14.4	15.2	14.9	14.4
WB 9719	61.7	55.7	50.7	55.4	63.4	61.9	61.3	62.6	14.1	15.0	14.7	14.6
MT SIDNEY	61.5	55.3	52.1	54.7	61.2	60.6	59.5	61.5	14.5	15.2	14.8	14.5
LANNING	60.4	54.8	50.8	55.1	60.4	59.6	58.7	60.4	14.9	15.8	15.1	14.9
SY Longmire	60.3	53.9	50.0	54.4	61.6	60.8	60.0	61.2	14.5	15.5	15.1	14.9
DUCLAIR	60.0	54.7	50.7	58.7	59.9	59.2	58.3	60.0	14.5	15.1	14.8	14.2
SY 611 CL2	59.3	52.4	48.8	53.6	62.0	60.1	59.6	61.5	14.5	15.5	15.0	14.7
WB 9879 CLP	59.2	53.6	49.8	54.7	60.5	60.0	59.3	60.8	14.7	15.6	15.1	14.7
SY INGMAR	59.1	52.4	47.9	52.4	61.4	60.2	59.5	61.6	15.0	15.9	15.6	15.1
REEDER	59.0	53.5	49.8	52.6	61.1	60.3	59.7	60.6	14.6	15.4	14.9	14.6
WB GUNNISON	58.2	51.9	49.2	53.2	61.3	60.5	59.7	60.5	13.8	14.7	14.4	14.0
CHOTEAU	58.1	53.7	49.5	55.9	60.3	59.8	59.1	60.2	14.5	15.5	14.8	14.4
CORBIN	57.7	50.6	48.2	52.5	61.1	60.6	59.9	60.7	14.5	15.3	14.9	14.5
MCNEAL	56.4	51.7	46.3	52.0	60.1	59.2	58.6	59.8	14.4	15.5	15.0	14.6
MT 1939		59.8	57.6	61.8		60.3	59.3	61.0		14.9	14.5	14.1
MS Ranchero		54.7	52.2	58.0		59.8	59.1	60.4		14.7	14.3	13.9
MT 2049			55.5	57.3			58.6	59.7			14.8	14.4
MT 2030			55.3	61.8			59.6	60.7			14.7	14.4
MT 2063			54.8	59.5			59.3	61.0			14.3	13.8
ROCKER			53.9	60.5			60.4	61.1			14.7	14.2
WB 9516			53.8	56.8			60.8	61.1			14.3	14.0
LCS Ascent			53.5	59.1			61.1	62.0			14.3	13.8
MT 2050			53.3	59.5			59.1	60.3			14.6	14.2
MT 2038			52.5	56.4			59.5	60.7			15.5	14.9
MT 2007			52.3	56.3			59.8	60.9			14.5	14.1
MT 2022			52.2	57.2			60.5	61.6			14.7	14.1
MT 2054			51.8	56.0			59.9	60.7			14.8	14.4
MT 2013			49.5	54.1			59.8	61.4			15.1	14.4
MS Cobra			49.2	55.3			60.1	61.1			15.2	14.5
AP Gunsmoke CL2			48.5	54.0			58.9	60.2			15.9	15.6
AP Smith			47.9	52.4			59.1	61.0			15.5	14.9
AAC Concord			46.2	51.6			58.9	60.2			15.3	15.0
THATCHER			39.8	42.4			56.6	59.5			15.3	15.0
LCS HammerAX				61.0				60.9				13.9
LCS Dual				58.5				61.1				14.0
WB 9929				56.3				58.7				14.8
ND HERON				54.1				62.3				14.8
WB 9668				51.6				60.8				15.5
MEAN	60	54.9	51.1	56.2	60.9	60.0	59.4	60.7	14.4	15.3	14.9	14.6
C.V.	5.3	5.5	7.0	8.1	0.6	1.2	1.8	1.1	2.1	2.0	2.9	3.3
F-VALUE (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	3.4	3.2	3.3	4.8	0.4	0.8	1.0	0.7	0.3	0.3	0.4	0.5

1)**bold** : highest or earliest value within a column, bold : equal value to highest or earliest value within a column based LSD(0.05)

2)Kalispell's 2020 data was excluded and no heading data for 2022, 3)Huntley's 2019 and 2022 data was excluded and no heading data for 2021

4) Conrad's 2020 and 2022 data was excluded and no heading data for 2021, 5) no heading data for 2022, 6) no data for Fort Benton at 2019

**2019-2022 OVERALL AVERAGE OF HEADING DATE, PLANT HEIGHT AND STEM SOLIDNESS
FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA
(Kalispell, Bozeman, Huntley, Moccasin, Conrad, Havre, Fort Benton, Sidney-dry, and Sidney-irri)**

LINE	HEADING DATE				PLANT HEIGHT				STEM SOLIDNESS (5-25) BOZEMAN ONLY			
	(JULIAN)				(INCHES)							
	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022
WB 9879 CLP	178.9	175.9	178.2	181.2	28.7	28.4	28.1	28.8	23.0	23.0	22.1	20.8
CHOTEAU	178.4	175.4	178.0	181.7	28.9	28.3	28.6	28.6	21.8	21.7	20.6	20.4
SY Longmire	177.8	175.0	177.4	180.3	28.4	27.9	27.5	27.8	20.1	20.3	20.7	20.3
DUCLAIR	176.4	173.1	176.2	179.7	29.4	29.0	28.9	29.4	19.7	20.0	19.2	18.3
DAGMAR	176.4	172.9	176.0	179.2	29.5	29.7	29.1	29.6	18.3	19.4	18.0	16.3
CORBIN	176.7	173.4	176.3	179.9	29.0	28.6	28.7	29.0	13.4	13.3	12.5	12.1
VIDA	179.1	176.0	178.6	182.2	29.6	29.0	29.0	29.4	13.1	13.3	12.7	10.8
WB GUNNISON	178.2	175.1	177.9	181.5	27.8	27.2	26.8	27.6	12.9	12.7	12.2	12.6
MT 1809	178.5	175.0	178.0	181.8	29.4	28.7	29.0	29.5	12.3	12.5	11.5	9.8
MT SIDNEY	176.8	173.9	177.2	179.8	29.4	28.9	29.2	27.7	9.8	9.7	9.5	7.7
SY 611 CL2	177.6	174.4	177.3	180.2	26.7	26.4	26.2	26.5	9.5	9.3	8.6	9.2
SY INGMAR	178.5	175.6	178.2	181.5	28.1	27.8	27.1	28.1	9.0	8.6	7.6	7.5
SY ROCKFORD	180.2	177.1	179.6	182.4	28.9	28.4	27.9	28.8	8.9	8.2	7.7	7.3
NS PRESSER CLP	181.0	178.1	180.5	184.1	31.3	30.4	30.0	31.1	8.2	7.7	7.2	7.1
MCNEAL	179.8	176.8	179.2	182.3	30.3	29.9	29.2	30.0	8.1	7.7	7.6	6.8
LANNING	176.5	172.7	175.8	179.1	28.1	27.4	27.5	28.1	8.1	7.9	7.5	7.6
REEDER	178.9	175.2	178.1	181.3	30.1	29.6	29.2	30.1	7.7	7.3	6.9	6.0
WB 9719	180.0	176.9	179.2	181.9	27.7	27.3	27.1	28.0	7.3	6.6	6.1	5.8
MT 1939		174.2	176.6	179.8		28.1	28.1	28.7		20.4	19.0	18.3
MS Ranchero		173.0	176.5	180.9		29.3	30.0	30.2		8.3	7.5	6.8
MT 2054			176.2	179.7			31.0	31.5			21.4	21.6
AAC Concord			179.0	182.7			31.5	32.1			21.3	18.5
MT 2050			177.2	180.8			28.5	28.5			19.1	18.2
MT 2038			175.8	179.4			29.6	30.6			14.6	12.9
MT 2063			176.8	179.6			28.6	29.1			14.6	12.5
MT 2022			174.6	178.1			28.7	28.9			13.6	12.1
MT 2030			176.7	179.9			27.6	28.1			13.0	11.0
MT 2013			175.5	178.7			29.8	30.5			11.3	9.0
ROCKER			178.8	182.1			28.9	29.4			10.1	7.5
MT 2049			176.0	178.8			27.4	27.6			9.5	8.8
AP Smith			179.0	182.1			25.6	25.8			9.5	10.3
WB 9516			178.4	181.4			28.0	29.0			7.8	7.0
AP Gunsmoke CL2			177.0	180.5			27.0	27.4			7.7	8.2
MT 2007			175.1	178.5			27.9	28.3			7.5	7.8
MS Cobra			177.0	180.5			28.0	28.7			7.1	7.4
LCS Ascent			175.7	178.7			29.0	28.9			6.6	6.0
THATCHER			181.7	184.8			36.1	36.8			6.2	6.4
WB 9929				181.4				29.8				8.6
WB 9668				178.2				25.4				8.6
LCS HammerAX				180.3				27.8				7.7
ND HERON				178.6				29.7				6.3
LCS Dual				179.9				29.2				6.0
MEAN	178.3	175.0	177.4	180.5	29.0	28.5	28.7	29.0	12.8	12.9	12.0	11.9
C.V.	0.3	0.4	0.3	0.4	2.4	2.8	4.2	3.7	9.5	8.1	11.0	16.2
F-VALUE (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	0.5	0.7	0.7	0.9	0.7	0.8	1.1	1.2	1.7	1.7	2.8	3.3

1) **bold** : highest or earliest value within a column, **bold** : equal value to highest or earliest value within a column based LSD(0.05)

2) Kalispell's 2020 data was excluded and no heading data for 2022, 3) Huntley's 2019 and 2022 data was excluded and no heading data for 2021

4) Conrad's 2020 and 2022 data was excluded and no heading data for 2021, 5) no heading data for 2022, 6) no data for Fort Benton at 2019

2020-2021 OVERALL AVERAGE OF MILLING AND BAKING TRAITS
(2020 : BOZEMAN, HAVRE, MOCCASIN, SIDNEY, 2021 : BOZEMAN, SIDNEY)

VARIETY / LINE	Flour yield (%)	Flour protein (% 14% m.b.)	Mixing tolerance	Mixing time (min.)	Mixing water absorption (%)	Bake mix time (min.)	Bake water absorption (%)	Loaf volume (cc)
CHOTEAU	71.0	13.1	1.5	3.2	67.5	6.1	76.9	1120
CORBIN	71.3	12.6	2.2	5.1	66.0	11.4	75.8	996
DAGMAR	70.1	13.2	2.8	3.7	67.9	7.3	78.0	1098
DUCLAIR	70.3	12.8	3.2	3.9	67.0	8.6	77.1	1117
EGAN	68.7	14.0	4.0	7.2	70.3	15.6	80.9	1214
LANNING	70.3	13.6	2.8	4.1	68.8	9.1	79.8	1162
LCS BUSTER	69.9	11.9	3.7	6.5	65.9	20.0	76.6	971
MCNEAL	69.1	12.8	3.8	6.4	69.5	14.6	80.4	1140
MS Ranchero	69.1	12.2	3.5	3.9	65.8	7.9	76.6	1048
MT 1809	71.2	12.9	2.3	2.8	67.3	5.1	77.0	1110
MT 1855	71.6	12.9	2.3	3.8	67.1	9.6	77.0	1097
MT 1904	71.7	12.8	1.8	3.6	66.2	6.6	76.2	1055
MT 1927	69.2	13.4	3.2	4.3	68.0	9.7	78.0	1119
MT 1931	69.2	13.1	3.2	4.1	66.5	8.2	76.9	1046
MT 1934	71.1	12.6	2.2	3.3	64.7	5.9	75.0	1053
MT 1938	70.5	13.5	1.8	3.2	66.0	6.0	76.2	1049
MT 1939	69.5	12.8	2.8	3.6	67.5	8.4	78.0	1059
MT 1951	69.8	14.2	3.0	3.2	68.4	6.9	78.5	1167
MT SIDNEY	70.8	13.0	1.8	4.4	66.6	10.1	77.0	1086
REEDER	69.4	13.1	1.8	3.0	65.1	5.6	75.2	1101
SY 611 CL2	68.3	13.1	2.8	3.5	68.4	7.1	78.8	1029
SY INGMAR	70.9	13.7	3.5	5.1	67.5	12.5	78.9	1148
SY Longmire	70.7	13.2	3.7	4.9	68.4	10.2	78.5	1178
SY McCloud	69.9	13.2	3.5	4.7	69.1	10.5	79.5	1062
SY Rockford	70.8	12.8	3.0	4.0	66.7	7.3	77.1	1098
VIDA	72.1	12.3	1.7	3.2	66.8	6.8	76.0	1097
WB 9590	70.9	13.2	3.2	4.4	67.1	9.2	77.3	1037
WB 9719	70.5	13.0	3.8	5.4	67.6	12.4	79.2	1019
WB 9879 CLP	69.1	13.5	2.0	2.5	66.7	3.8	75.8	1036
WB GUNNISON	68.8	12.5	3.8	6.8	66.7	13.7	79.0	1136
MEAN	70.2	13.0	2.8	4.2	67.2	9.2	77.6	1088
C.V.	1.6	5.0	31.0	28.9	3.4	37.5	3.3	6.8
PROBABILITY (LINE)	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001
LSD(0.05)	1.3	0.7	1.0	1.4	2.6	4.0	2.9	85

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2019-2022 ADVANCED SPRING WHEAT NURSERY, KALISPELL (WET) : YIELD, TEST WEIGHT AND PROTEIN

ID	YIELD			TEST WEIGHT			PROTEIN		
	(BU/AC)			(LB/BU)			(%)		
	2019, 2021- 2022	2021- 2022	2022	2019, 2021- 2022	2021- 2022	2022	2019, 2021- 2022	2021- 2022	2022
MT SIDNEY	<u>80.8</u>	97.7	81.6	61.5	62.3	64.1	12.3	10.9	10.4
NS PRESSER CLP	79.3	89.2	71.2	60.9	61.0	62.6	11.6	10.6	10.0
DUCLAIR	79.0	92.5	93.2	60.7	61.0	62.8	11.9	10.6	10.5
SY ROCKFORD	76.7	93.0	83.0	59.9	60.3	62.5	12.6	11.2	10.8
MT 1809	76.0	90.3	75.2	60.5	60.8	62.3	12.0	10.5	10.8
SY Longmire	74.7	89.3	81.2	62.3	62.5	63.9	12.1	10.6	10.6
DAGMAR	74.2	86.3	88.8	61.4	61.7	63.8	12.1	10.7	10.8
CORBIN	73.7	88.8	78.8	61.5	61.7	63.5	11.5	10.1	9.9
WB GUNNISON	73.1	87.1	78.2	61.8	61.9	63.1	11.8	10.6	10.6
SY 611 CL2	72.7	84.6	72.3	62.6	62.3	63.5	12.1	10.6	10.9
VIDA	71.2	82.3	69.5	61.2	61.5	63.2	11.6	10.4	10.2
SY INGMAR	70.4	82.8	77.1	62.4	62.6	64.0	<u>13.0</u>	11.3	11.3
WB 9719	69.4	84.8	73.0	<u>63.9</u>	<u>64.1</u>	<u>65.6</u>	12.1	10.5	10.1
REEDER	69.4	80.8	66.3	62.0	62.3	63.3	12.3	11.1	11.0
LANNING	69.2	80.7	66.1	61.1	61.2	62.6	12.6	11.2	11.1
MCNEAL	69.0	78.5	65.2	61.2	61.5	62.8	12.2	10.9	10.9
WB 9879 CLP	68.4	81.2	77.9	61.0	61.6	63.8	12.2	10.6	10.4
CHOTEAU	67.3	81.6	78.6	60.8	61.4	63.3	11.9	10.3	10.3
THATCHER	62.4	71.7	55.4	60.6	60.8	62.6	12.4	11.3	10.7
MT 1939		<u>101.4</u>	92.6		61.4	63.5		11.0	10.6
MT 2063		100.9	85.9		62.0	64.2		10.2	9.7
MT 2013		99.1	73.1		61.9	63.9		11.6	10.4
WB 9516		98.0	81.5		62.2	63.7		11.4	10.1
MS Ranchero		94.1	82.6		60.9	62.8		10.3	10.6
MT 2049		92.6	69.7		60.0	61.6		11.8	10.9
MT 2038		92.5	72.8		61.4	62.5		11.4	11.2
MT 2030		92.0	81.9		60.5	62.4		10.9	10.8
LCS Ascent		90.8	80.6		61.9	64.0		10.3	10.3
MT 2050		90.0	83.9		60.9	63.0		10.9	10.9
ROCKER		89.2	80.1		62.2	63.6		10.6	10.3
MT 2022		88.9	85.8		61.7	63.9		10.5	10.4
AP Smith		88.5	78.7		62.0	63.6		<u>12.0</u>	11.3
MS Cobra		88.3	71.4		62.0	63.7		11.6	10.6
AP Gunsmoke CL2		84.9	80.2		61.0	62.7		10.7	11.0
MT 2054		81.2	75.9		61.9	63.1		10.6	10.9
MT 2007		79.6	66.9		61.6	63.0		10.5	10.7
AAC Concord		77.1	74.8		60.7	62.5		10.8	11.1
LCS HammerAX			<u>106.7</u>			63.0			10.2
LCS Dual			87.4			63.1			9.9
WB 9929			82.5			62.0			10.2
ND HERON			74.4			64.6			11.1
WB 9668			73.8			64.0			10.9
MEAN	72.5	87.9	78.4	61.4	61.6	63.3	12.1	10.8	10.7
C.V.	9.7	11.4	7.2	0.8	1.4	0.3	3.6	5.5	2.3
F-VALUE (ENTRY)	ns	ns	<0.001	<0.001	ns	<0.001	<0.05	ns	<0.001
LSD(0.05)	-	-	9.7	0.8	-	0.3	0.7	-	0.4

1) not planted in 2020, no height data for 2022

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2019-2022 ADVANCED SPRING WHEAT NURSERY, BOZEMAN (DRY) : YIELD, TEST WEIGHT AND PROTEIN

ID	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022
MT 1809	87.9	86.1	76.2	91.0	58.9	58.9	58.9	59.3	15.4	15.4	15.4	15.3
SY ROCKFORD	86.5	83.7	73.3	88.3	59.3	59.5	59.0	59.8	14.5	14.6	14.7	14.6
VIDA	85.1	82.8	73.7	86.6	59.6	59.6	59.9	60.2	14.5	14.4	14.3	14.5
WB 9719	84.2	80.8	73.5	88.0	<u>63.8</u>	<u>63.6</u>	<u>63.4</u>	<u>63.8</u>	14.5	14.5	14.8	14.9
DAGMAR	83.7	81.9	73.3	83.8	60.9	61.2	61.0	61.1	15.4	15.5	15.8	15.7
NS PRESSER CLP	82.2	79.9	70.3	81.8	58.4	58.3	58.5	58.4	15.0	15.1	15.2	15.1
LANNING	80.7	77.8	69.4	80.4	60.5	60.5	60.1	60.9	<u>15.7</u>	<u>15.5</u>	<u>15.9</u>	16.1
DUCLAIR	80.6	76.1	69.3	85.7	59.6	59.6	59.1	59.7	15.0	14.4	14.7	14.6
MT SIDNEY	80.2	77.0	70.9	77.5	60.5	60.7	60.1	60.8	14.8	14.8	15.0	15.3
SY INGMAR	79.7	76.3	68.1	81.6	61.0	61.1	60.5	61.1	15.3	15.3	15.5	15.3
WB 9879 CLP	77.6	73.7	67.3	78.3	60.0	60.4	60.1	60.4	15.2	15.2	15.2	15.4
REEDER	76.9	73.4	66.8	77.5	60.9	60.9	60.6	60.2	15.3	15.3	15.4	15.9
CHOTEAU	76.6	74.5	69.2	83.4	60.0	60.4	59.8	60.2	14.9	14.7	14.9	15.1
SY Longmire	75.2	71.2	66.4	79.9	61.1	60.9	60.4	60.8	14.9	14.7	15.0	14.7
CORBIN	75.2	72.5	63.9	77.4	60.8	61.0	60.7	60.9	14.7	14.5	14.6	15.0
SY 611 CL2	74.1	72.3	65.4	77.0	61.3	61.2	61.0	60.7	15.1	15.1	15.2	15.7
WB GUNNISON	72.9	71.4	65.6	79.3	61.3	61.2	60.7	60.6	14.2	14.1	14.5	14.5
MCNEAL	69.6	67.8	60.5	71.1	59.5	59.4	58.7	58.9	15.4	15.3	15.6	16.2
MT 1939		84.7	77.4	88.9		61.5	61.1	61.8		14.6	14.7	15.0
MS Ranchero		83.2	73.3	86.4		60.3	59.9	60.6		14.3	14.6	14.2
MT 2030			<u>77.7</u>	91.5			60.5	61.6			15.2	15.3
WB 9516			75.7	<u>91.8</u>			61.8	62.2			14.1	14.2
MT 2063			75.1	87.6			60.7	61.0			14.9	14.7
MT 2049			74.5	87.0			59.4	60.2			15.1	15.3
MT 2007			74.1	86.6			61.0	61.4			14.8	15.2
LCS Ascent			73.6	89.2			60.8	61.8			14.8	14.5
ROCKER			73.2	88.4			60.7	61.1			15.2	15.1
MT 2054			70.4	80.3			60.8	60.7			15.5	15.7
MT 2038			70.3	81.0			60.3	60.7			15.9	16.1
MT 2050			68.9	82.3			60.3	60.8			14.8	14.7
MS Cobra			68.3	82.1			60.8	61.6			15.4	15.1
MT 2022			68.0	81.0			60.5	61.9			15.4	15.0
MT 2013			66.4	79.0			61.4	61.8			15.2	15.3
AP Gunsmoke CL2			65.5	77.8			58.7	59.2			15.9	15.9
AP Smith			64.8	74.8			59.6	60.4			15.6	15.5
AAC Concord			59.9	68.2			59.3	60.1			<u>16.1</u>	16.5
THATCHER			51.0	58.8			58.5	59.1			16.0	16.3
MT 21104				90.8				61.5				14.6
LCS Dual				90.3				61.5				14.5
LCS HammerAX				88.7				60.9				14.2
ND HERON				83.3				62.8				15.6
WB 9929				79.7				56.7				15.7
MEAN	79.4	77.4	69.5	82.2	60.4	60.5	60.2	60.7	15.0	14.9	15.1	15.4
C.V.	4.4	4.6	4.6	3.4	1.0	0.9	0.9	1 rep	2.7	2.3	2.4	1 rep
F-VALUE (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1 rep	<0.001	<0.001	<0.001	1 rep
LSD(0.05)	4.9	5.9	6.5	4.8	0.9	0.9	1.1	1 rep	0.6	0.6	0.7	1 rep

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2019-2022 ADVANCED SPRING WHEAT NURSERY, HUNTLEY (DRY) : YIELD,TEST WEIGHT AND PROTEIN

ID	YIELD		TEST WEIGHT		PROTEIN	
	(BU/AC)		(LB/BU)		(%)	
	2020-2021	2021	2020-2021	2021	2020-2021	2021
MT 1939	<u>73.7</u>	<u>50.7</u>	60.2	57.7	15.6	16.3
NS PRESSER CLP	72.7	38.2	57.4	56.8	16.4	17.0
VIDA	70.5	42.8	59.5	57.2	15.8	16.7
MT SIDNEY	70.0	40.4	60.5	58.5	15.9	16.7
MT 1927	69.9	42.5	58.3	55.6	16.6	17.5
DUCLAIR	69.8	47.1	58.8	55.8	16.2	17.1
MT 1809	69.2	41.9	58.8	56.0	16.4	17.4
SY Rockford	68.9	40.8	59.0	56.6	16.0	17.0
DAGMAR	68.6	44.1	60.2	58.3	16.8	17.6
MT 1904	68.6	40.8	<u>61.2</u>	59.7	15.8	17.2
MT 1938	68.5	43.9	59.3	56.9	16.5	17.0
SY Longmire	67.5	43.6	60.0	57.0	16.3	17.5
MT 1931	66.9	48.9	59.0	56.4	16.4	16.6
WB 9719	66.9	38.7	<u>61.2</u>	57.5	15.8	17.0
MT 1855	66.1	39.2	60.1	58.4	16.1	17.0
MT 1934	65.5	40.3	59.4	57.2	16.4	17.2
CHOTEAU	64.9	38.7	59.6	57.6	16.3	17.3
SY 611 CL2	64.6	41.6	59.6	55.8	16.4	17.3
MT 1951	64.6	37.2	57.6	54.8	17.9	18.7
SY INGMAR	64.1	40.3	59.2	55.4	17.0	18.5
WB 9879 CLP	64.1	39.5	59.8	57.8	16.4	17.3
MCNEAL	64.0	34.7	59.5	57.4	17.2	18.3
LANNING	63.4	45.8	59.2	56.6	17.1	17.3
EGAN	62.9	36.3	58.6	56.1	<u>18.4</u>	<u>19.5</u>
REEDER	61.9	41.5	60.2	58.0	16.3	17.0
WB GUNNISON	60.8	37.9	60.1	57.1	15.7	17.3
CORBIN	60.5	36.0	60.6	58.5	16.1	17.1
MS Ranchero	59.8	36.0	59.5	57.2	15.9	16.9
LCS BUSTER	59.2	25.8	59.1	58.1	14.7	16.1
SY McCloud	58.5	36.3	60.8	58.2	16.8	17.9
WB 9590	56.6	35.3	59.5	56.9	16.7	18.2
MT 2049		<u>50.7</u>		56.8		16.3
MT 2007		46.0		57.3		16.7
MT 2020		45.9		56.8		16.3

2019-2022 ADVANCED SPRING WHEAT NURSERY, HUNTLEY (DRY) : YIELD, TEST WEIGHT AND PROTEIN (continued)

ID	YIELD		TEST WEIGHT		PROTEIN	
	(BU/AC)		(LB/BU)		(%)	
	2020-2021	2021	2020-2021	2021	2020-2021	2021
MT 2019		44.5		56.7		16.6
MT 2050		44.3		57.9		16.3
MT 2054		44.0		58.3		16.8
MT 2021		43.5		56.5		16.8
MT 2022		43.5		58.4		17.3
MT 2011		42.6		59.0		17.2
MT 2005		41.9		59.5		17.4
MT 2030		41.5		58.6		17.4
ROCKER		41.2		59.7		17.3
MT 2034		41.1		55.6		17.3
MT 2038		40.8		57.5		18.0
WB 9516		40.3		59.8		16.3
MT 2063		40.1		57.4		16.5
BZ917-252		39.3		51.9		19.2
MT 2072		38.2		56.6		18.2
509-2		38.0		56.2		18.1
AP Gunsmoke CL2		37.9		56.2		18.9
AP Smith		36.8		55.5		17.7
MT 2075		36.6		56.0		17.0
LNR 1713		36.6		56.3		16.8
AAC Concord		36.6		58.6		17.7
LCS Ascent		36.5		59.5		16.9
MT 2047		36.2		58.9		17.2
MT 2065		36.0		57.5		18.0
MT 2018		35.4		60.0		17.2
MT 2043		34.6		58.3		17.4
MT 2045		34.3		56.9		17.3
MS Cobra		33.4		58.7		18.2
THATCHER		27.8		56.7		17.7
MT 2013		25.5		58.1		17.7
MEAN	65.6	39.7	59.5	57.3	16.4	17.3
C.V.	8.1	12.4	1.7	1.3	2.9	2.0
F-VALUE (ENTRY)	ns	<0.001	ns	<0.001	<0.001	<0.001
LSD(0.05)	-	8.4	-	1.3	1.0	0.6

1) no data for 2019 and 2022, no heading data for 2021

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2019-2022 ADVANCED SPRING WHEAT NURSERY, MOCCASIN (DRY) : YIELD, TEST WEIGHT AND PROTEIN

ID	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022
LANNING	<u>42.7</u>	37.3	31.6	39.0	58.3	57.4	54.7	54.5	15.0	15.8	17.0	16.4
MT 1809	<u>42.7</u>	37.2	29.4	33.4	57.5	56.9	54.0	53.2	14.9	15.8	17.1	16.7
SY ROCKFORD	41.8	35.3	29.1	30.3	57.6	56.9	54.1	53.2	15.0	15.9	17.2	17.0
VIDA	41.4	37.3	29.5	35.0	57.6	57.0	54.3	53.0	14.6	15.5	16.7	16.2
NS PRESSER CLP	40.8	37.2	31.0	35.6	57.1	56.9	54.7	54.5	14.8	15.6	16.6	15.6
DAGMAR	40.5	<u>38.5</u>	31.0	<u>39.1</u>	58.6	57.7	54.9	53.1	15.0	15.8	17.0	16.7
WB GUNNISON	38.9	34.1	26.0	30.0	58.1	57.6	55.0	53.1	15.0	15.6	16.7	16.5
MCNEAL	38.4	35.8	30.3	34.8	58.0	57.6	55.4	54.1	14.8	15.5	16.6	16.1
DUCLAIR	37.4	34.0	27.5	32.9	57.9	57.2	54.6	54.6	15.0	15.7	17.1	16.8
WB 9879 CLP	37.3	33.8	25.0	26.4	58.3	57.4	54.5	53.3	15.6	16.5	17.9	18.1
MT SIDNEY	36.9	34.9	28.8	31.9	58.8	58.2	55.3	54.5	15.0	15.8	17.2	16.6
CORBIN	36.4	30.8	23.9	25.0	58.6	58.1	55.7	53.9	15.6	16.3	17.9	18.0
CHOTEAU	36.4	31.7	25.1	28.2	57.8	56.9	54.1	53.4	15.5	16.3	17.9	17.6
REEDER	36.1	33.6	26.4	30.2	58.6	57.9	55.3	53.9	15.1	15.8	17.2	16.6
SY 611 CL2	35.8	31.8	24.5	26.9	60.0	59.1	<u>56.8</u>	56.0	15.1	15.9	17.2	17.1
SY Longmire	33.9	28.9	20.8	18.2	59.1	58.2	55.6	54.3	15.9	17.0	18.6	19.1
SY INGMAR	33.5	27.0	19.4	16.3	58.4	57.7	54.8	54.4	<u>16.3</u>	<u>17.4</u>	<u>19.2</u>	19.4
WB 9719	33.2	29.4	20.9	18.9	<u>60.2</u>	<u>59.4</u>	56.5	53.9	15.2	16.3	18.0	19.2
MT 1939		38.0	31.2	34.8		57.2	54.3	53.4		15.4	16.6	16.0
MS Ranchero		36.6	30.9	36.6		57.7	55.4	54.5		15.2	16.5	16.0
MT 2049			<u>33.4</u>	36.5			54.1	53.3			16.3	15.8
MT 2030			31.9	37.0			55.0	54.5			16.5	16.4
MT 2007			31.4	38.4			54.6	53.6			16.2	15.7
ROCKER			31.3	38.3			56.6	55.0			16.6	15.9
LCS Ascent			31.2	34.5			<u>56.8</u>	55.2			16.5	16.3
MT 2063			31.0	34.3			55.1	53.5			16.7	16.5
MT 2022			30.9	36.7			55.4	54.4			16.9	16.5
MT 2054			30.4	34.9			55.4	53.8			16.4	15.8
AAC Concord			29.7	36.3			54.4	53.1			17.5	16.9
MT 2038			29.6	31.2			55.6	54.2			17.0	16.8
MT 2050			29.2	35.8			53.6	52.2			16.9	16.3
MS Cobra			29.0	31.3			55.8	53.8			17.3	17.0
MT 2013			24.3	28.2			54.9	52.7			17.2	17.2
THATCHER			23.4	27.8			54.1	53.7			17.7	17.4
AP Smith			22.6	21.5			55.0	54.0			18.3	18.4
AP Gunsmoke CL2			22.2	20.7			54.4	53.7			19.0	<u>19.5</u>
WB 9516			19.3	11.7			54.7	50.4			18.1	19.4
WB 9929				31.9				52.8				17.8
LCS HammerAX				31.7				54.5				16.0
ND HERON				30.1				<u>56.1</u>				16.9
LCS Dual				28.3				53.4				16.8
WB 9668				28.3				53.7				17.9
MEAN	38.0	34.2	27.6	31.4	58.4	57.7	55.0	53.8	15.2	15.9	17.2	17.0
C.V.	10.6	10.2	17.1	8.9	1.3	1.4	2.0	1.3	3.8	3.7	3.9	2.5
F-VALUE (ENTRY)	<0.05	<0.01	ns	<0.001	<0.001	<0.01	ns	<0.001	<0.01	<0.01	<0.01	<0.001
LSD(0.05)	5.7	5.7	-	4.8	1.1	1.3	-	1.2	0.8	1.0	1.4	0.7

1) no heading data for 2022

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2019-2022 ADVANCED SPRING WHEAT NURSERY, CONRAD (DRY) : YIELD, TEST WEIGHT AND PROTEIN

ID	YIELD		TEST WEIGHT		PROTEIN	
	(BU/AC)		(LB/BU)		(%)	
	2019, 2021 ¹⁾	2021	2019, 2021 ¹⁾	2021	2019, 2021 ¹⁾	2021
DAGMAR	<u>58.5</u>	50.2	61.8	60.8	14.7	14.5
MT 1855	55.1	53.0	61.1	60.0	14.3	13.9
WB 9879 CLP	54.3	49.1	60.5	59.7	14.5	13.7
WB 9719	54.2	44.2	<u>64.7</u>	<u>64.1</u>	13.3	12.7
NS PRESSER CLP	53.3	49.5	60.8	60.0	13.4	12.7
MT 1809	52.9	43.6	60.5	59.5	14.0	13.0
WB GUNNISON	51.9	45.6	62.3	61.8	12.9	12.4
SY Longmire	51.7	43.6	61.7	61.3	14.1	13.4
VIDA	51.5	44.8	61.3	60.6	13.5	12.8
CORBIN	49.2	46.8	61.8	60.6	14.0	13.7
CHOTEAU	48.2	43.3	60.3	59.8	14.0	13.2
WB 9590	47.8	45.0	61.7	60.9	<u>14.8</u>	13.8
SY McCloud	47.5	43.2	62.4	61.5	<u>15.4</u>	<u>14.7</u>
LANNING	47.3	45.3	60.5	59.5	14.2	12.9
MT 1716	47.1	46.7	61.3	60.2	<u>14.7</u>	13.5
SY INGMAR	46.9	40.0	61.1	60.8	<u>14.8</u>	<u>14.4</u>
SY 611 CL2	46.7	42.3	62.7	61.9	<u>14.7</u>	<u>14.2</u>
DUCLAIR	46.3	38.4	60.2	59.4	<u>14.8</u>	13.9
REEDER	46.1	45.9	61.4	60.9	14.4	13.2
SY Rockford	46.0	46.7	59.4	59.1	14.3	13.6
EGAN	45.8	45.3	59.5	58.8	<u>15.0</u>	<u>14.4</u>
MCNEAL	43.7	36.5	60.7	60.1	13.4	12.9
THATCHER	37.6	39.8	58.2	58.6	14.0	13.0
MT 1939		<u>56.8</u>		60.1		13.3
MT 2034		54.0		57.9		13.4
LCS Ascent		53.3		61.1		13.8
MT 2021		52.7		58.9		12.8
WB 9516		51.7		61.2		12.4
LNR 1713		51.6		60.3		13.5
LCS BUSTER		51.1		57.4		12.3
MT 2063		50.9		60.8		13.7
MS Ranchero		50.7		59.9		13.1
MT 1904		50.3		60.7		13.4
MT 2050		50.2		59.4		13.8

2019-2022 ADVANCED SPRING WHEAT NURSERY, CONRAD (DRY) : YIELD, TEST WEIGHT AND PROTEIN (continued)

ID	YIELD		TEST WEIGHT		PROTEIN	
	(BU/AC)		(LB/BU)		(%)	
	2019, 2021 ¹⁾	2021	2019, 2021 ¹⁾	2021	2019, 2021 ¹⁾	2021
MT 1927		50.1		57.0		13.6
MT 2065		50.0		62.3		13.6
MT 1931		50.0		60.0		13.1
MT 1934		49.8		60.0		<u>14.6</u>
MT 2013		48.9		60.8		<u>14.4</u>
MT 2022		48.9		61.1		13.4
MT 2054		48.7		60.3		<u>14.0</u>
MT 2038		48.6		60.1		<u>14.5</u>
BZ917-252		48.2		57.3		13.8
MT 2030		48.1		59.8		13.1
MT 1951		47.5		57.0		<u>14.2</u>
MT 2005		47.2		61.6		<u>14.3</u>
MT 2075		47.1		60.4		13.1
MT 2047		46.6		60.1		<u>14.7</u>
MT 2049		46.6		58.8		<u>14.4</u>
MT 2018		46.5		61.8		13.2
MT 2007		46.2		60.5		<u>14.1</u>
MT 2045		46.1		60.1		<u>14.6</u>
MT 2019		45.8		59.7		13.8
509-2		45.6		59.8		<u>14.2</u>
MT 2072		44.9		60.0		<u>14.9</u>
ROCKER		44.3		61.0		13.4
MT 1938		43.8		59.4		<u>14.5</u>
MT 2011		43.5		61.2		13.4
MS Cobra		41.2		61.1		13.3
MT 2020		40.8		60.0		13.1
AAC Concord		40.7		58.9		13.3
AP Gunsmoke CL2		40.3		60.1		<u>14.9</u>
AP Smith		36.7		60.1		<u>14.6</u>
MT 2043		35.5		59.6		<u>15.0</u>
MEAN	49.1	46.4	61.1	60.1	14.2	13.7
C.V.	9.8	15.0	0.8	0.9	2.9	4.9
F-VALUE (ENTRY)	ns	ns	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	-	-	1.0	1.0	0.9	1.1

1) No data available for 2020 and 2022

bold : highest or earliest value within a column**bold** : equal value to highest or earliest value within a column based LSD(0.05)

2019-2022 ADVANCED SPRING WHEAT NURSERY, HAVRE (DRY) : YIELD, TEST WEIGHT AND PROTEIN

ID	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022
MT 1809	49.0	47.9	35.5	43.3	58.7	58.8	58.2	57.4	15.3	15.1	15.7	15.3
DAGMAR	47.5	46.6	34.9	44.4	59.9	60.1	59.5	59.3	15.7	15.5	16.1	15.5
VIDA	46.1	44.1	33.9	42.1	59.0	58.9	58.3	58.4	14.9	14.7	15.2	14.8
WB GUNNISON	44.8	42.2	32.8	36.8	59.9	59.7	59.0	59.3	14.7	14.5	15.0	14.4
WB 9879 CLP	44.5	42.1	31.5	38.4	59.1	59.1	58.3	58.9	15.9	15.6	16.3	15.8
SY Longmire	43.7	41.5	29.8	36.9	60.1	59.8	59.4	59.5	15.6	15.3	16.0	15.6
DUCLAIR	43.6	41.7	30.7	39.6	58.2	58.1	57.4	57.8	15.7	15.5	16.1	15.5
MT SIDNEY	43.4	40.9	29.9	36.8	59.9	59.9	59.1	60.2	15.5	15.4	16.0	15.5
CHOTEAU	43.0	42.4	31.5	38.1	58.9	58.9	57.9	58.4	15.6	15.3	15.9	15.3
WB 9719	42.9	40.6	30.3	39.6	60.8	60.5	59.8	60.1	15.0	14.8	15.5	15.0
NS PRESSER CLP	42.5	41.1	33.5	40.7	58.2	58.1	57.6	56.8	15.0	14.8	15.2	15.0
CORBIN	42.1	40.9	33.3	37.7	59.6	59.5	59.0	58.6	15.8	15.6	16.1	15.8
SY ROCKFORD	42.0	40.9	30.4	36.8	58.5	58.6	58.0	59.1	15.4	15.2	15.9	15.4
LANNING	41.4	40.3	28.6	35.3	58.9	58.5	57.8	57.2	15.8	15.4	16.0	15.5
REEDER	41.0	40.6	30.0	38.9	59.4	59.3	58.4	58.6	15.2	15.0	15.6	15.3
SY INGMAR	40.9	39.6	30.5	37.6	60.3	60.2	59.7	60.0	15.7	15.4	16.0	15.3
MCNEAL	40.5	38.4	28.9	36.7	58.1	57.9	57.6	57.7	15.2	15.0	15.6	15.3
SY 611 CL2	39.6	37.4	26.2	33.5	60.4	60.1	59.4	59.6	15.4	15.1	15.6	15.3
MT 1939		43.9	33.1	42.4		59.0	57.9	58.5		14.9	15.6	15.0
MS Ranchero		39.7	31.4	38.3		58.7	58.1	57.7		14.7	15.1	14.6
ROCKER			37.4	45.6			59.3	59.4			15.5	15.2
MT 2050			35.8	46.7			58.2	59.2			15.3	14.4
MT 2054			34.9	40.9			59.0	59.4			15.5	15.0
WB 9516			33.5	42.6			60.2	60.6			15.1	14.6
MT 2049			33.2	40.1			57.2	57.0			15.6	15.1
MT 2063			32.9	41.7			59.4	59.8			15.4	14.8
MT 2030			32.5	42.3			58.4	57.6			15.2	14.9
LCS Ascent			31.7	41.4			60.6	60.2			15.0	14.3
MT 2022			31.6	39.6			59.7	59.8			15.4	14.8
AP Smith			30.9	39.9			58.9	59.4			15.8	15.2
AAC Concord			30.8	34.7			57.9	58.7			16.0	15.7
MT 2038			30.7	40.6			59.0	59.3			16.7	15.4
MT 2007			29.9	38.0			59.4	59.3			15.4	15.0
AP Gunsmoke CL2			29.8	35.9			57.8	58.3			16.6	16.7
MT 2013			29.6	38.5			59.9	60.1			15.7	15.0
MS Cobra			29.3	39.0			59.1	59.0			15.8	15.0
THATCHER			22.8	29.3			56.3	57.1			16.3	15.8
LCS HammerAX				40.3				58.7				14.3
WB 9929				39.9				56.8				15.9
LCS Dual				38.5				59.2				14.9
ND HERON				37.3				60.0				15.5
WB 9668				34.7				59.8				16.4
MEAN	43.2	41.6	31.4	39.4	59.3	59.2	58.6	58.9	15.4	15.1	15.7	15.3
C.V.	6.1	6.6	7.5	7.1	1.0	1.0	1.2	0.7	1.4	1.3	2.0	1.5
PROBABILITY (ENTRY)	<0.001	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	3.8	4.6	4.8	4.8	0.8	1.0	1.4	0.8	0.3	0.3	0.6	0.4

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2019-2022 ADVANCED SPRING WHEAT NURSERY, SIDNEY (DRY) : YIELD, TEST WEIGHT AND PROTEIN

ID	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022
MT 1809	61.5	50.2	52.7	53.5	61.5	61.2	60.2	61.9	14.6	15.0	14.2	13.3
NS PRESSER CLP	61.3	51.2	53.0	50.5	60.6	60.1	59.0	60.1	14.0	14.2	13.5	12.5
WB 9719	58.9	45.9	47.8	45.2	64.6	64.0	63.4	64.9	14.2	14.6	14.0	13.3
VIDA	58.9	49.7	51.5	49.8	61.8	61.5	60.7	61.6	13.8	14.0	13.2	12.7
SY ROCKFORD	58.8	45.4	49.0	46.5	61.3	61.0	60.3	62.9	14.4	14.8	14.2	13.2
DAGMAR	58.3	50.1	53.8	49.4	63.1	63.1	62.8	63.5	14.7	15.0	14.2	14.1
MT SIDNEY	57.9	46.8	49.4	48.2	62.5	62.3	61.4	64.2	14.4	14.7	14.2	13.2
REEDER	57.4	47.1	48.8	47.5	62.4	62.0	61.2	62.8	14.7	14.9	14.1	13.4
SY INGMAR	55.7	46.0	46.0	42.5	62.8	62.7	62.2	64.3	14.9	14.9	14.3	13.9
CHOTEAU	55.7	43.6	46.0	45.5	61.6	61.4	60.8	62.0	14.6	14.8	14.1	13.4
SY 611 CL2	55.2	45.0	48.8	48.1	63.2	62.7	61.7	63.7	14.8	15.3	14.6	14.0
LANNING	55.0	45.2	48.8	48.8	61.8	61.5	60.8	63.1	15.2	15.2	14.3	13.7
MCNEAL	53.2	41.7	43.0	44.2	60.9	60.2	59.6	61.8	14.7	15.3	14.8	13.7
WB 9879 CLP	53.1	42.1	45.4	44.4	62.1	62.0	61.7	63.3	14.7	15.2	14.5	13.8
SY Longmire	52.4	42.2	43.2	43.1	63.1	62.6	61.8	63.8	14.6	14.9	14.3	13.5
DUCLAIR	51.2	39.2	40.2	39.4	60.9	60.4	59.9	61.8	14.3	14.7	14.4	13.5
CORBIN	49.9	39.5	43.5	44.1	62.2	62.0	61.4	63.0	14.6	14.8	14.4	13.6
WB GUNNISON	48.3	39.9	42.4	41.2	62.5	62.2	61.8	63.1	14.0	14.3	13.9	13.3
MT 1939		50.1	52.0	49.0		62.2	61.7	64.0		14.0	13.5	13.0
MS Ranchero		42.4	44.8	42.0		62.2	61.5	62.6		13.9	13.3	12.9
MT 2030			53.9	53.8			61.4	63.7			13.4	12.9
MT 2049			52.5	49.4			60.4	62.4			13.9	13.4
LCS Ascent			51.5	49.4			63.9	65.0			13.4	13.0
MT 2038			51.0	47.9			62.3	63.6			13.8	13.1
MT 2007			50.4	49.6			61.6	63.5			13.6	12.9
MT 2063			49.9	46.8			61.2	62.9			13.6	13.1
MT 2013			49.8	47.1			62.7	64.4			14.4	14.0
ROCKER			49.5	46.8			61.8	63.0			14.2	13.5
WB 9516			49.3	48.9			63.0	64.2			13.4	12.5
MT 2050			48.9	46.6			61.4	62.6			13.6	13.4
MT 2022			48.7	46.6			63.0	64.5			13.7	13.3
MS Cobra			48.6	47.3			62.2	63.7			14.4	13.7
MT 2054			47.9	43.7			62.1	63.4			13.6	13.4
AP Gunsmoke CL2			47.4	46.1			61.0	62.7			14.5	13.7
AP Smith			46.8	45.6			61.4	63.6			14.7	13.9
AAC Concord			40.9	39.5			60.9	62.5			14.9	14.1
THATCHER			33.7	30.3			58.7	60.6			15.3	14.2
WB 9929				47.8				60.6				14.2
LCS Dual				46.5				63.8				12.7
LCS HammerAX				45.8				63.5				13.1
ND HERON				43.8				64.7				14.3
WB 9668				41.6				63.6				14.9
MEAN	55.7	45.2	47.8	46.2	62.2	61.9	61.4	63.2	14.5	14.7	14.0	13.5
C.V.	6.2	5.3	4.1	3.4	1.1	1.1	1.1	0.4	3.1	2.4	2.5	2.4
PROBABILITY (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001
LSD(0.05)	4.9	4.0	4.0	2.7	0.9	1.1	1.4	0.4	0.6	0.6	0.7	0.5

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2019-2022 ADVANCED SPRING WHEAT NURSERY, SIDNEY (IRRI) : YIELD, TEST WEIGHT AND PROTEIN

ID	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022	2019-2022	2020-2022	2021-2022	2022
SY 611 CL2	91.2	86.4	77.7	91.5	64.0	64.2	64.0	65.2	14.6	14.5	14.3	14.2
SY Longmire	90.3	87.0	80.2	92.0	63.8	64.1	63.9	65.0	14.6	14.3	14.2	14.2
WB 9719	89.2	86.5	82.7	93.7	65.9	66.2	66.3	67.0	14.3	14.1	13.9	13.9
MT 1809	89.1	87.3	78.1	88.1	62.5	63.0	63.0	63.1	14.9	14.5	14.3	14.4
DAGMAR	88.4	86.0	81.3	88.5	63.4	63.9	64.1	64.8	15.3	15.1	14.6	14.3
VIDA	87.7	84.4	78.5	81.8	63.0	63.3	63.5	63.5	14.4	14.1	13.7	14.0
SY ROCKFORD	87.5	84.0	78.2	87.8	62.5	63.1	63.2	63.9	14.3	14.2	14.1	14.2
SY INGMAR	86.9	84.0	75.9	88.4	64.0	64.5	64.3	65.7	14.9	14.6	14.4	14.1
LANNING	86.4	82.7	74.6	87.8	62.0	62.3	61.9	63.8	15.5	15.3	15.0	14.6
REEDER	85.8	82.8	77.7	82.4	63.3	63.6	63.6	64.5	14.9	14.7	14.5	14.2
MT SIDNEY	84.4	82.6	74.9	82.1	64.0	64.4	64.2	65.3	14.6	14.3	14.0	14.3
NS PRESSER CLP	84.1	82.3	79.3	81.1	62.0	62.4	62.8	61.9	14.2	13.9	13.5	13.9
DUCLAIR	82.1	80.0	76.3	89.9	62.0	62.4	62.3	63.5	14.5	14.4	14.1	13.8
MCNEAL	80.2	76.7	72.3	83.5	62.0	62.4	62.3	63.7	15.2	15.0	14.9	14.0
CHOTEAU	79.8	78.9	74.5	85.5	62.5	63.0	63.2	64.0	14.8	14.7	14.2	14.0
WB 9879 CLP	79.2	78.7	75.0	86.1	62.8	63.6	63.8	64.8	14.9	14.5	14.2	13.4
CORBIN	77.3	75.6	67.4	78.8	63.3	63.8	63.7	64.1	15.0	14.8	14.7	14.3
WB GUNNISON	77.2	77.1	71.1	76.3	63.4	63.9	63.8	63.8	14.1	13.9	13.8	13.8
MS Ranchero		86.7	77.3	91.8		63.4	63.3	64.3		13.8	13.8	13.5
MT 1939		84.7	77.9	89.5		63.2	63.1	64.5		14.2	14.0	13.8
MT 2030			83.1	95.1			63.3	64.2			14.4	14.1
WB 9516			82.4	91.5			65.7	65.7			13.4	13.1
LCS Ascent			82.2	93.7			65.1	65.8			13.5	13.6
ROCKER			81.9	92.7			64.0	64.3			14.0	14.0
MT 2049			80.4	86.5			62.9	63.5			14.4	14.5
MT 2063			78.5	85.8			64.0	64.4			12.9	12.9
AP Gunsmoke CL2			78.5	93.0			63.4	64.4			14.8	15.2
MT 2007			77.7	83.9			63.6	64.3			14.1	13.9
MT 2050			77.0	89.0			63.2	63.7			14.7	14.3
MS Cobra			76.6	92.4			64.2	64.9			14.7	14.6
AP Smith			75.7	84.4			63.7	64.8			14.5	14.2
MT 2038			74.5	91.4			62.0	63.6			15.4	15.0
MT 2022			73.9	80.5			64.3	65.0			14.3	14.0
MT 2013			73.2	86.6			64.4	65.3			14.4	14.2
MT 2054			70.9	84.2			62.8	63.6			14.8	14.7
AAC Concord			67.2	79.3			63.3	64.0			15.6	15.3
THATCHER			65.1	75.6			62.8	63.8			14.8	14.5
LCS Dual				95.2				65.5				13.5
LCS HammerAX				90.5				64.6				13.8
WB 9929				85.4				63.1				14.4
ND HERON				83.9				65.8				14.6
WB 9668				81.7				64.3				15.1
MEAN	84.8	82.7	76.5	86.5	63.1	63.5	63.6	64.4	14.7	14.4	14.3	14.3
C.V.	5.6	6.1	6.5	4.2	1.0	1.1	1.2	0.3	2.6	2.8	2.8	2.6
PROBABILITY (ENTRY)	<0.001	ns	ns	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001
LSD(0.05)	6.7	-	-	6.2	0.9	1.2	1.5	0.3	0.6	0.7	0.8	0.7

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2019-2022 ADVANCED SPRING WHEAT NURSERY, FORT BENTON (DRY) : YIELD, TEST WEIGHT AND PROTEIN

ID	YIELD (BU/AC)			TEST WEIGHT (LB/BU)			PROTEIN (%)		
	2020- 2022	2021- 2022	2022	2020- 2022	2021- 2022	2022	2020- 2022	2021- 2022	2022
MT 1939	43.3	37.9	35.4	58.5	56.8	.	15.3	15.5	15.2
DUCLAIR	41.8	34.7	30.4	58.0	55.2	.	15.0	15.5	14.9
MT 1809	41.2	36.7	31.7	58.7	57.6	.	15.4	15.8	15.5
WB 9879 CLP	40.6	34.4	31.7	58.0	56.0	.	16.0	16.2	16.1
WB 9719	39.8	33.3	29.2	58.7	56.5	.	15.2	15.7	15.8
CHOTEAU	39.7	35.6	32.1	58.2	57.6	.	16.1	15.7	15.4
SY Longmire	39.2	33.0	29.7	59.8	58.2	.	16.0	16.5	16.8
NS PRESSER CLP	39.2	33.2	28.6	57.4	55.7	.	15.6	15.2	15.1
VIDA	38.7	36.0	32.5	58.2	58.1	.	14.9	15.0	15.0
DAGMAR	38.5	35.6	31.8	59.1	57.9	.	15.7	15.9	15.8
WB GUNNISON	37.9	34.1	30.9	58.6	55.9	.	14.7	15.2	14.6
MCNEAL	37.4	31.7	28.8	57.4	55.2	.	15.3	15.7	15.7
LANNING	36.6	32.0	28.6	57.9	56.1	.	16.1	16.7	16.9
REEDER	35.4	30.5	25.6	58.4	57.1	.	15.5	16.0	15.8
MT SIDNEY	34.9	29.8	24.5	58.0	54.8	.	15.6	16.1	16.1
CORBIN	34.6	30.3	25.8	59.4	57.4	.	15.3	15.6	15.2
MS Ranchero	34.5	31.2	28.5	57.1	55.7	.	15.1	15.3	15.3
SY ROCKFORD	30.8	26.3	21.9	55.0	51.8	.	15.4	16.1	15.9
SY INGMAR	29.7	28.4	23.1	55.7	55.3	.	16.5	16.4	16.2
SY 611 CL2	29.1	28.3	25.8	53.6	53.3	.	16.0	16.1	15.8
MT 2054		37.5	32.3		58.6	.		15.6	15.5
ROCKER		37.3	31.7		58.4	.		15.6	15.6
MT 2030		36.7	31.3		58.8	.		15.9	16.2
MT 2049		35.8	32.1		57.5	.		15.8	15.8
MT 2050		35.5	32.1		57.1	.		15.4	15.1
MT 2022		35.4	30.5		60.5	.		15.2	14.9
MT 2007		35.3	30.7		58.5	.		15.4	15.0
MT 2038		34.5	30.0		57.0	.		16.7	16.4
WB 9516		34.0	29.4		58.4	.		14.6	14.2
MT 2063		33.6	34.6		53.0	.		15.0	14.6
AAC Concord		33.0	28.5		56.3	.		15.7	15.6
LCS Ascent		31.1	24.8		60.2	.		14.8	14.6
AP Gunsmoke CL2		29.7	24.3		57.5	.		17.5	17.5
MT 2013		28.7	26.0		54.3	.		15.6	14.9
AP Smith		28.3	21.9		55.7	.		16.2	16.1
MS Cobra		28.0	23.3		56.8	.		15.8	15.5
THATCHER		23.1	19.7		43.1	.		16.0	15.8
WB 9929			27.0			.			15.5
ND HERON			25.8			.			15.8
LCS Dual			23.4			.			15.8
WB 9668			23.2			.			16.7
LCS HammerAX			23.1			.			16.0
MEAN	37.1	32.7	29.0	57.8	56.3	.	15.5	15.7	15.7
C.V.	8.3	8.9	6.6	2.2	-	.	3.6	2.0	1 rep
PROBABILITY (ENTRY)	<0.001	<0.001	<0.001	<0.05	-	.	<0.05	<0.001	1 rep
LSD(0.05)	5.1	5.9	3.3	2.7	-	.	0.9	0.6	1 rep

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

**2022 OVERALL AGRONOMIC SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY GROWN UNDER
RAIN-FED CONDITION**

(BOZEMAN, BILLINGS, MOCCASIN, HAVRE, SIDNEY-DRY, FORT BENTON, HINGHAM, WILLISTON)

ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)
MT 1809	50.5	58.7	15.0	181.9	27.9
MT 1939	50.2	59.9	14.5	180.3	27.8
ROCKER	50.1	60.6	14.5	182.2	28.2
MT 2063	48.8	60.1	14.2	179.8	27.2
VIDA	48.7	59.0	14.5	183.0	28.2
MT 2030	48.5	60.1	14.9	180.7	26.9
MT 2050	48.4	59.1	14.4	181.2	27.3
MT 2049	48.4	58.7	15.0	179.0	26.3
NS PRESSER CLP	48.0	58.1	14.4	184.2	29.6
MT 2007	47.7	59.9	14.6	178.5	27.3
DAGMAR	47.6	60.1	15.0	179.0	28.0
LCS Ascent	47.5	60.8	14.2	178.8	27.6
MT 2022	46.8	60.7	14.6	177.9	27.3
WB 9516	46.5	60.3	14.4	181.9	27.8
MS Ranchero	46.4	59.4	14.1	182.7	28.2
MT 2054	46.1	59.7	14.7	179.7	30.1
LCS HammerAX	45.9	60.2	14.3	180.4	26.8
LANNING	45.8	59.4	15.3	180.2	27.0
CHOTEAU	45.8	59.1	15.1	182.0	27.2
WB GUNNISON	45.6	59.7	14.2	181.9	26.9
LCS Dual	45.5	60.2	14.4	180.1	27.6
DUCLAIR	45.4	59.1	15.0	180.0	27.5
WB 9719	45.1	61.4	14.8	182.3	27.0
WB 9929	45.1	57.9	15.1	181.5	28.7
MT 2038	45.0	59.5	15.1	180.5	28.9
WB 9879 CLP	44.8	59.6	15.4	181.6	27.3
REEDER	44.7	59.1	14.9	182.4	28.9
MT SIDNEY	44.7	60.3	14.8	180.3	26.6
MCNEAL	44.0	58.9	14.9	183.1	29.2
SY ROCKFORD	43.9	59.1	14.8	183.4	27.7
MT 2013	43.8	60.2	14.9	178.7	29.2
SY Longmire	43.5	59.9	15.4	180.9	26.5
CORBIN	43.2	59.9	15.1	179.7	27.3
ND HERON	42.5	61.3	15.4	178.3	28.3
SY 611 CL2	42.5	60.7	15.2	180.5	25.2
MS Cobra	42.3	60.4	14.8	180.8	27.2
WB 9668	42.2	60.0	16.1	178.0	24.3
SY INGMAR	41.9	60.6	15.4	181.6	26.5
AAC Concord	41.8	58.9	15.3	183.2	30.6
AP Smith	41.2	60.3	15.4	182.4	24.6
AP Gunsmoke CL2	40.9	59.5	16.0	180.5	25.6
THATCHER	34.9	58.0	15.0	185.5	35.2
MEAN	45.6	59.7	15.0	180.8	27.7
C.V.	7.9	1.3	3.7	0.6	3.7
PROBABILITY(LINE)	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	3.5	0.8	0.5	1.5	1.0

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

**2022 OVERALL AGRONOMIC SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY GROWN
UNDER IRRI / HIGH RAINFALL CONDITION (BOZEMAN-IRRI, KALISPELL, SIDNEY-IRRI)**

ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)
LCS HammerAX	<u>102.9</u>	63.1	12.7	182.9	32.1
LCS Dual	99.4	63.8	12.5	183.3	35.1
DUCLAIR	98.7	62.4	12.8	182.1	35.5
MT 1939	98.5	63.4	13.1	182.5	34.0
LCS Ascent	96.9	64.3	12.7	181.9	34.4
WB 9516	96.8	64.1	12.4	184.2	34.1
MT 2063	96.5	63.6	12.0	182.3	34.0
MT 2030	95.6	63.0	13.5	182.6	33.6
AP Gunsmoke CL2	94.5	62.6	13.9	183.7	34.7
SY Longmire	94.4	63.4	13.1	183.4	33.3
DAGMAR	94.3	63.7	13.6	182.3	36.1
ROCKER	94.3	63.3	13.1	184.7	34.9
SY ROCKFORD	94.0	62.4	13.0	185.5	34.7
MT 2050	93.3	62.6	13.4	183.9	34.8
WB 9719	93.2	<u>65.8</u>	12.7	185.3	32.7
MS Ranchero	93.0	62.9	12.7	183.5	36.7
WB 9929	92.2	61.4	13.2	184.8	34.6
MT 1809	91.7	61.8	13.6	184.7	35.5
MS Cobra	91.1	63.6	13.3	183.6	34.1
WB 9879 CLP	91.0	63.4	12.8	184.0	34.9
CHOTEAU	90.9	62.8	12.9	183.9	35.7
MT 2022	90.3	64.0	13.1	<u>181.2</u>	34.3
MT 2038	88.6	62.7	14.0	182.3	36.2
MT SIDNEY	88.5	63.8	13.2	182.5	33.2
SY 611 CL2	88.5	63.5	13.4	183.3	31.7
SY INGMAR	88.3	63.8	13.5	184.2	33.5
MT 2049	87.8	62.1	13.5	182.0	32.4
MT 2013	87.6	63.8	13.2	181.9	36.7
MT 2054	86.7	62.6	13.6	182.9	37.9
ND HERON	86.5	64.8	13.6	181.9	35.4
WB 9668	86.5	63.1	14.0	181.5	28.1
AP Smith	86.2	63.6	13.5	185.0	30.6
CORBIN	86.1	63.2	13.0	182.8	34.5
VIDA	85.9	62.5	12.9	184.8	35.5
MT 2007	85.6	63.1	13.3	182.0	34.1
WB GUNNISON	85.4	62.8	12.7	184.2	32.7
LANNING	85.1	62.5	13.8	182.2	33.4
NS PRESSER CLP	85.0	61.1	13.0	187.4	37.1
REEDER	81.9	62.9	13.6	184.2	36.6
MCNEAL	80.8	62.0	13.7	185.1	34.9
AAC Concord	80.6	62.4	<u>14.2</u>	185.8	39.7
THATCHER	69.0	62.0	13.8	187.3	<u>45.6</u>
MEAN	90.1	63.1	13.4	183.4	34.7
C.V.	5.8	0.7	2.4	0.3	2.6
PROBABILITY(LINE)	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	8.4	0.7	0.5	1.0	1.8

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

**2022 OVERALL AGRONOMIC SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY
GROWN ACROSS MONTANA (COMBINED)**

ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)
MT 1939	63.4	61.0	14.1	181.3	29.0
ROCKER	62.1	61.4	14.1	183.3	29.5
MT 2063	61.8	61.1	13.6	180.9	28.6
MT 1809	61.7	59.6	14.6	183.1	29.4
LCS HammerAX	61.5	61.1	13.9	181.5	27.9
MT 2030	61.3	61.0	14.5	181.5	28.3
LCS Ascent	61.0	61.9	13.8	180.1	29.0
MT 2050	60.6	60.2	14.1	182.4	28.8
DAGMAR	60.4	61.2	14.6	180.4	29.6
WB 9516	60.3	61.5	13.9	182.9	29.0
LCS Dual	60.2	61.3	13.9	181.5	29.1
DUCLAIR	60.0	60.1	14.4	180.9	29.1
MT 2049	59.1	59.7	14.6	180.3	27.5
MS Ranchero	59.1	60.4	13.7	183.1	29.9
VIDA	58.8	60.1	14.0	183.8	29.7
MT 2022	58.7	61.7	14.2	179.3	28.7
WB 9719	58.2	62.7	14.2	183.6	28.1
CHOTEAU	58.1	60.3	14.5	182.8	28.9
NS PRESSER CLP	58.1	59.0	14.0	185.5	31.1
MT 2007	58.0	60.8	14.2	180.0	28.7
WB 9929	57.9	58.9	14.6	182.9	29.9
SY ROCKFORD	57.5	60.1	14.3	184.3	29.1
SY Longmire	57.4	61.0	14.8	182.0	27.8
WB 9879 CLP	57.4	60.8	14.7	182.6	28.8
MT 2054	57.2	60.6	14.4	181.1	31.7
MT 2038	56.9	60.4	14.8	181.3	30.4
MT SIDNEY	56.7	61.4	14.4	181.2	28.0
LANNING	56.5	60.4	14.9	181.1	28.3
WB GUNNISON	56.4	60.7	13.8	182.9	28.0
MT 2013	55.8	61.3	14.4	180.1	30.7
MS Cobra	55.6	61.3	14.4	182.0	28.6
AP Gunsmoke CL2	55.5	60.5	15.5	181.9	27.4
SY 611 CL2	55.0	61.5	14.7	181.7	26.5
CORBIN	54.9	60.9	14.5	181.0	28.7
REEDER	54.9	60.3	14.5	183.2	30.5
SY INGMAR	54.5	61.5	14.9	182.7	27.9
ND HERON	54.5	62.4	14.9	179.8	29.8
WB 9668	54.2	60.9	15.5	179.5	25.1
MCNEAL	54.0	59.8	14.6	183.9	30.3
AP Smith	53.4	61.3	14.9	183.5	25.8
AAC Concord	52.4	60.0	15.0	184.3	32.5
THATCHER	44.2	59.2	14.7	186.3	37.3
MEAN	57.7	60.7	14.5	181.9	29.1
C.V.	7.6	1.2	3.5	0.5	3.6
PROBABILITY(LINE)	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	3.7	0.6	0.4	0.9	0.9

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

**2022 MAJOR AGRONOMIC TRAITS, STEM SOLIDNESS AND SAW FLY CUT FOR
THE ADVANCED SPRING WHEAT NURSERY GROWN UNDER RAIN-FED CONDITION**

ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	STEM SOLIDNESS (5-25)	SAW FLY CUT (%) <u>FORT BENTON</u>	SAW FLY CUT (%) <u>HAVRE</u>	SAW FLY CUT (%) <u>COMBINED</u>
MT 1809	50.5	58.7	15.0	9.8	40	21	31
MT 1939	50.2	59.9	14.5	18.3	23	22	23
ROCKER	50.1	60.6	14.5	7.5	23	8	15
MT 2063	48.8	60.1	14.2	12.5	23	20	21
VIDA	48.7	59.0	14.5	10.8	25	14	20
MT 2030	48.5	60.1	14.9	11.0	80	42	61
MT 2050	48.4	59.1	14.4	18.2	20	12	16
MT 2049	48.4	58.7	15.0	8.8	70	43	56
NS PRESSER CLP	48.0	58.1	14.4	7.1	80	22	51
MT 2007	47.7	59.9	14.6	7.8	75	36	56
DAGMAR	47.6	60.1	15.0	16.3	15	2	8
LCS Ascent	47.5	60.8	14.2	6.0	75	24	49
MT 2022	46.8	60.7	14.6	12.1	23	9	16
WB 9516	46.5	60.3	14.4	7.0	55	18	36
MS Ranchero	46.4	59.4	14.1	6.8	80	21	50
MT 2054	46.1	59.7	14.7	21.6	13	2	7
LCS HammerAX	45.9	60.2	14.3	7.7	75	60	68
LANNING	45.8	59.4	15.3	7.6	80	45	63
CHOTEAU	45.8	59.1	15.1	20.4	15	7	11
WB GUNNISON	45.6	59.7	14.2	12.6	28	6	17
LCS Dual	45.5	60.2	14.4	6.0	65	35	50
DUCLAIR	45.4	59.1	15.0	18.3	13	3	8
WB 9719	45.1	61.4	14.8	5.8	85	38	62
WB 9929	45.1	57.9	15.1	8.6	65	25	45
MT 2038	45.0	59.5	15.1	12.9	48	24	36
WB 9879 CLP	44.8	59.6	15.4	20.8	5	0	3
REEDER	44.7	59.1	14.9	6.0	70	39	55
MT SIDNEY	44.7	60.3	14.8	7.7	75	11	43
MCNEAL	44.0	58.9	14.9	6.8	70	32	51
SY ROCKFORD	43.9	59.1	14.8	7.3	80	31	55
MT 2013	43.8	60.2	14.9	9.0	20	14	17
SY Longmire	43.5	59.9	15.4	20.3	13	16	15
CORBIN	43.2	59.9	15.1	12.1	20	5	12
ND HERON	42.5	61.3	15.4	6.3	70	21	46
SY 611 CL2	42.5	60.7	15.2	9.2	80	28	54
MS Cobra	42.3	60.4	14.8	7.4	75	24	49
WB 9668	42.2	60.0	16.1	8.6	65	9	37
SY INGMAR	41.9	60.6	15.4	7.5	70	29	49
AAC Concord	41.8	58.9	15.3	18.5	5	4	5
AP Smith	41.2	60.3	15.4	10.3	70	22	46
AP Gunsmoke CL2	40.9	59.5	16.0	8.2	75	51	63
THATCHER	34.9	58.0	15.0	6.4	80	22	51
MEAN (n=64)	45.6	59.7	15.0	11.9	44	19	31
C.V.	7.9	1.3	3.7	16.2	19.3	43.2	41.8
PROBABILITY (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	3.5	0.8	0.5	3.3	17	14	26

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, KALISPELL (HIGH RAINFALL)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	KERNEL WEIGHT (G)
53	LCS HammerAX	106.7	63.0	10.2	184.2	39.0
10	DUCLAIR	93.2	62.8	10.5	183.5	39.4
17	MT 1939	92.6	63.5	10.6	183.6	41.8
13	DAGMAR	88.8	63.8	10.8	183.6	42.4
52	LCS Dual	87.4	63.1	9.9	184.5	37.9
26	MT 2063	85.9	64.2	9.7	183.1	42.2
20	MT 2022	85.8	63.9	10.4	182.6	39.8
24	MT 2050	83.9	63.0	10.9	184.6	38.7
2	SY ROCKFORD	83.0	62.5	10.8	185.9	40.1
54	MS Ranchero	82.6	62.8	10.6	183.5	38.5
63	WB 9929	82.5	62.0	10.2	186.0	43.3
21	MT 2030	81.9	62.4	10.8	183.8	42.1
15	MT SIDNEY	81.6	64.1	10.4	183.4	33.1
62	WB 9516	81.5	63.7	10.1	185.0	43.8
57	SY Longmire	81.2	63.9	10.6	184.2	37.3
51	LCS Ascent	80.6	64.0	10.3	182.9	35.0
60	AP Gunsmoke CL2	80.2	62.7	11.0	184.3	38.8
50	ROCKER	80.1	63.6	10.3	185.5	36.7
4	CORBIN	78.8	63.5	9.9	184.4	46.0
59	AP Smith	78.7	63.6	11.3	186.0	35.4
8	CHOTEAU	78.6	63.3	10.3	185.0	37.9
3	WB GUNNISON	78.2	63.1	10.6	185.8	46.8
14	WB 9879 CLP	77.9	63.8	10.4	184.6	35.8
1	SY INGMAR	77.1	64.0	11.3	185.6	34.7
25	MT 2054	75.9	63.1	10.9	183.6	48.8
16	MT 1809	75.2	62.3	10.8	186.2	40.1
55	AAC Concord	74.8	62.5	11.1	187.9	41.2
49	ND HERON	74.4	64.6	11.1	183.6	37.6
64	WB 9668	73.8	64.0	10.9	182.9	35.9
19	MT 2013	73.1	63.9	10.4	182.7	39.3
61	WB 9719	73.0	65.6	10.1	186.4	38.0
22	MT 2038	72.8	62.5	11.2	183.5	44.7
58	SY 611 CL2	72.3	63.5	10.9	184.5	36.6
56	MS Cobra	71.4	63.7	10.6	184.3	35.7
12	NS PRESSER CLP	71.2	62.6	10.0	189.2	41.4
23	MT 2049	69.7	61.6	10.9	183.0	39.5
9	VIDA	69.5	63.2	10.2	185.5	41.4
18	MT 2007	66.9	63.0	10.7	183.2	41.7
6	REEDER	66.3	63.3	11.0	185.2	41.1
11	LANNING	66.1	62.6	11.1	184.0	40.0
7	MCNEAL	65.2	62.8	10.9	185.8	41.9
5	THATCHER	55.4	62.6	10.7	187.3	33.0
MEAN (n=64)		78.4	63.3	10.7	184.5	39.9
C.V.		7.2	0.3	2.3	0.3	1.7
PROBABILITY(LINE)		<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)		9.7	0.3	0.4	1.1	1.1

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, BOZEMAN (DRY)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)	STEM SOLIDNESS (5-25) ¹⁾	GLD ²⁾ (days)
62	WB 9516	<u>91.8</u>	62.2	14.2	188.0	31.7	7.0	34.0
21	MT 2030	91.5	61.6	15.3	186.3	33.2	11.0	29.5
16	MT 1809	91.0	59.3	15.3	188.0	34.5	9.8	31.0
52	LCS Dual	90.3	61.5	14.5	186.7	33.8	6.0	33.0
51	LCS Ascent	89.2	61.8	14.5	185.0	35.0	6.0	<u>35.0</u>
17	MT 1939	88.9	61.8	15.0	185.9	33.0	18.3	29.5
53	LCS HammerAX	88.7	60.9	14.2	186.7	33.0	7.7	29.0
50	ROCKER	88.4	61.1	15.1	187.9	33.6	7.5	31.0
2	SY ROCKFORD	88.3	59.8	14.6	188.3	33.4	7.3	28.0
61	WB 9719	88.0	<u>63.8</u>	14.9	188.6	32.5	5.8	31.0
26	MT 2063	87.6	61.0	14.7	185.2	34.3	12.5	30.5
23	MT 2049	87.0	60.2	15.3	184.8	32.3	8.8	33.0
18	MT 2007	86.6	61.4	15.2	185.0	33.8	7.8	30.5
9	VIDA	86.6	60.2	14.5	188.0	35.4	10.8	32.5
54	MS Ranchero	86.4	60.6	14.2	185.4	36.9	6.8	32.5
10	DUCLAIR	85.7	59.7	14.6	184.3	35.1	18.3	29.5
13	DAGMAR	83.8	61.1	15.7	185.0	35.3	16.3	31.5
8	CHOTEAU	83.4	60.2	15.1	186.9	34.3	20.4	28.5
49	ND HERON	83.3	62.8	15.6	184.4	36.1	6.3	32.5
24	MT 2050	82.3	60.8	14.7	187.0	33.9	18.2	29.5
56	MS Cobra	82.1	61.6	15.1	187.4	32.8	7.4	28.5
12	NS PRESSER CLP	81.8	58.4	15.1	189.0	37.4	7.1	34.0
1	SY INGMAR	81.6	61.1	15.3	188.4	32.3	7.5	28.0
22	MT 2038	81.0	60.7	16.1	184.9	34.1	12.9	29.5
20	MT 2022	81.0	61.9	15.0	183.7	35.4	12.1	32.0
11	LANNING	80.4	60.9	16.1	185.2	32.6	7.6	30.0
25	MT 2054	80.3	60.7	15.7	186.0	37.4	21.6	31.0
57	SY Longmire	79.9	60.8	14.7	187.0	31.3	20.3	27.5
63	WB 9929	79.7	56.7	15.7	188.0	33.8	8.6	28.0
3	WB GUNNISON	79.3	60.6	14.5	187.0	30.3	12.6	29.5
19	MT 2013	79.0	61.8	15.3	184.6	38.2	9.0	30.0
14	WB 9879 CLP	78.3	60.4	15.4	187.5	33.9	20.8	28.0
64	WB 9668	78.1	59.6	16.5	<u>183.4</u>	28.0	8.6	30.0
60	AP Gunsmoke CL2	77.8	59.2	15.9	186.6	31.9	8.2	28.5
15	MT SIDNEY	77.5	60.8	15.3	185.7	32.5	7.7	31.5
6	REEDER	77.5	60.2	15.9	188.3	36.1	6.0	31.0
4	CORBIN	77.4	60.9	15.0	185.9	34.4	12.1	28.5
58	SY 611 CL2	77.0	60.7	15.7	187.1	29.4	9.2	28.0
59	AP Smith	74.8	60.4	15.5	188.3	29.7	10.3	28.5
7	MCNEAL	71.1	58.9	16.2	188.3	34.5	6.8	28.5
55	AAC Concord	68.2	60.1	16.5	188.0	40.8	18.5	26.5
5	THATCHER	58.8	59.1	16.3	191.1	<u>47.2</u>	6.4	26.0
MEAN (n=64)		82.2	60.7	15.4	186.5	34.2	11.9	30.0
C.V.		3.4	1 REP	1 REP	0.3	1.9	16.2	4.8
PROBABILITY(LINE)		<0.001	1 REP	1 REP	<0.001	<0.001	<0.001	<0.001
LSD(0.05)		4.8	1 REP	1 REP	0.9	1.0	3.3	2.7

1) 5=hollow stem and 25=solid stem, 2) GLD=green leaf duration (stay-green)

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, BOZEMAN (IRRI)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)
26	MT 2063	117.8	62.3	13.4	185.0	34.8
62	WB 9516	117.5	62.8	14.0	188.3	34.3
51	LCS Ascent	116.4	63.2	14.1	185.0	35.8
52	LCS Dual	115.6	62.7	14.2	186.3	35.7
17	MT 1939	113.4	62.3	14.8	186.0	34.9
10	DUCLAIR	112.9	60.8	14.1	185.0	35.7
61	WB 9719	112.8	64.9	14.0	189.3	33.7
16	MT 1809	111.8	60.1	15.6	187.7	36.1
53	LCS HammerAX	111.6	61.6	14.1	186.3	34.4
2	SY ROCKFORD	111.2	60.9	14.0	188.7	35.7
60	AP Gunsmoke CL2	110.4	60.8	15.6	186.7	35.7
50	ROCKER	110.0	61.9	15.0	188.0	36.0
57	SY Longmire	109.9	61.4	14.4	186.7	33.4
21	MT 2030	109.8	62.4	15.6	185.3	34.3
56	MS Cobra	109.4	62.2	14.6	187.3	34.2
14	WB 9879 CLP	108.9	61.6	14.7	187.3	35.8
63	WB 9929	108.7	59.0	15.1	188.3	34.9
8	CHOTEAU	108.6	61.2	14.5	187.0	35.9
23	MT 2049	107.1	61.2	15.1	185.0	33.2
24	MT 2050	106.9	61.2	14.9	187.0	36.1
9	VIDA	106.5	60.8	14.5	188.7	36.7
18	MT 2007	105.9	62.1	15.2	185.0	35.2
13	DAGMAR	105.7	62.5	15.7	185.0	36.9
20	MT 2022	104.7	63.1	14.8	183.7	35.7
54	MS Ranchero	104.6	61.7	14.1	185.0	37.2
64	WB 9668	103.9	61.1	15.9	183.7	29.3
19	MT 2013	103.2	62.3	14.9	185.0	38.6
12	NS PRESSER CLP	102.6	58.8	15.0	190.3	37.5
15	MT SIDNEY	101.9	62.1	15.0	185.3	34.9
58	SY 611 CL2	101.7	61.8	15.2	186.7	33.0
3	WB GUNNISON	101.7	61.5	13.8	186.7	34.2
22	MT 2038	101.7	61.9	15.7	184.7	36.2
11	LANNING	101.4	61.2	15.6	184.7	33.3
49	ND HERON	101.2	64.1	15.2	184.7	36.4
4	CORBIN	100.8	62.1	14.9	185.3	35.2
25	MT 2054	100.1	61.2	15.2	185.7	38.4
1	SY INGMAR	99.3	61.6	15.2	187.3	34.6
6	REEDER	96.9	61.0	15.5	188.0	38.4
59	AP Smith	95.5	62.3	15.1	188.3	31.0
7	MCNEAL	93.7	59.5	16.2	188.7	36.6
55	AAC Concord	87.6	60.7	16.3	188.3	41.8
5	THATCHER	75.9	59.6	16.3	191.0	49.0
MEAN (n=64)		105.4	61.6	15.1	186.5	35.6
C.V.		2.3	1 rep	1 rep	0.3	1.6
PROBABILITY(LINE)		<0.001	1 rep	1 rep	<0.001	<0.001
LSD(0.05)		4.7	1 rep	1 rep	0.9	1.0

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, MOCCASIN (DRY), (Collaborator : Jed Eberly, CARC)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAW FYL CUT (0-9) ¹⁾
13	DAGMAR	<u>39.1</u>	53.1	16.7	24.8	<u>0.0</u>
11	LANNING	39.0	54.5	16.4	24.7	2.3
18	MT 2007	38.4	53.6	15.7	26.6	1.3
50	ROCKER	38.3	55.0	15.9	25.4	0.3
21	MT 2030	37.0	54.5	16.4	23.4	1.7
20	MT 2022	36.7	54.4	16.5	26.2	1.0
54	MS Ranchero	36.6	54.5	16.0	25.9	1.3
23	MT 2049	36.5	53.3	15.8	24.6	3.7
55	AAC Concord	36.3	53.1	16.9	26.1	<u>0.0</u>
24	MT 2050	35.8	52.2	16.3	24.0	0.7
12	NS PRESSER CLP	35.6	54.5	15.6	27.3	1.3
9	VIDA	35.0	53.0	16.2	24.6	1.7
25	MT 2054	34.9	53.8	15.8	28.4	<u>0.0</u>
17	MT 1939	34.8	53.4	16.0	25.7	1.3
7	MCNEAL	34.8	54.1	16.1	26.5	2.0
51	LCS Ascent	34.5	55.2	16.3	25.6	1.0
26	MT 2063	34.3	53.5	16.5	26.4	1.3
16	MT 1809	33.4	53.2	16.7	25.1	1.3
10	DUCLAIR	32.9	54.6	16.8	24.3	0.3
15	MT SIDNEY	31.9	54.5	16.6	24.2	2.0
63	WB 9929	31.9	52.8	17.8	24.8	<u>0.0</u>
53	LCS HammerAX	31.7	54.5	16.0	24.3	8.3
56	MS Cobra	31.3	53.8	17.0	25.3	1.0
22	MT 2038	31.2	54.2	16.8	27.4	1.3
2	SY ROCKFORD	30.3	53.2	17.0	24.1	0.3
6	REEDER	30.2	53.9	16.6	24.7	4.0
49	ND HERON	30.1	<u>56.1</u>	16.9	26.9	3.7
3	WB GUNNISON	30.0	53.1	16.5	24.0	<u>0.0</u>
52	LCS Dual	28.3	53.4	16.8	24.1	2.7
64	WB 9668	28.3	53.7	17.9	23.2	1.3
8	CHOTEAU	28.2	53.4	17.6	23.1	1.0
19	MT 2013	28.2	52.7	17.2	26.8	2.0
5	THATCHER	27.8	53.7	17.4	<u>31.0</u>	6.3
58	SY 611 CL2	26.9	56.0	17.1	23.9	3.0
14	WB 9879 CLP	26.4	53.3	18.1	22.9	0.3
4	CORBIN	25.0	53.9	18.0	24.0	0.3
59	AP Smith	21.5	54.0	18.4	21.0	3.0
60	AP Gunsmoke CL2	20.7	53.7	<u>19.5</u>	23.5	10.0
61	WB 9719	18.9	53.9	19.2	24.9	1.0
57	SY Longmire	18.2	54.3	19.1	22.2	4.7
1	SY INGMAR	16.3	54.4	19.4	25.1	2.7
62	WB 9516	11.7	50.4	19.4	26.0	1.0
MEAN (n=64)		31.4	53.8	17.0	24.9	1.8
C.V.		8.9	1.3	2.5	4.7	76.4
PROBABILITY(LINE)		<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)		4.8	1.2	0.7	2.0	2.2

1) 0=low cutting and 9=severe cutting

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, HAVRE (DRY), (Collaborator : Peggy Lamb, NARC)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)	SAW FYL CUT (%)	GLD ¹⁾ (days)
24	MT 2050	46.7	59.2	14.4	170.7	23.7	12	34.2
50	ROCKER	45.6	59.4	15.2	172.6	26.5	8	34.8
13	DAGMAR	44.4	59.3	15.5	169.7	25.4	2	36.7
16	MT 1809	43.3	57.4	15.3	172.9	24.3	21	33.7
62	WB 9516	42.6	60.6	14.6	171.9	25.4	18	36.7
17	MT 1939	42.4	58.5	15.0	171.0	24.4	22	33.1
21	MT 2030	42.3	57.6	14.9	169.9	23.5	42	35.7
9	VIDA	42.1	58.4	14.8	174.2	24.8	14	33.8
26	MT 2063	41.7	59.8	14.8	170.7	24.3	20	37.0
51	LCS Ascent	41.4	60.2	14.3	169.2	23.6	24	37.8
25	MT 2054	40.9	59.4	15.0	169.6	26.5	2	35.6
12	NS PRESSER CLP	40.7	56.8	15.0	175.4	26.1	22	32.9
22	MT 2038	40.6	59.3	15.4	169.2	25.7	24	36.0
53	LCS HammerAX	40.3	58.7	14.3	171.7	24.6	60	33.0
23	MT 2049	40.1	57.0	15.1	169.7	22.9	43	35.5
63	WB 9929	39.9	56.8	15.9	171.0	27.3	25	35.6
59	AP Smith	39.9	59.4	15.2	173.2	22.1	22	35.9
10	DUCLAIR	39.6	57.8	15.5	172.8	24.8	3	33.6
20	MT 2022	39.6	59.8	14.8	168.8	22.5	9	36.5
61	WB 9719	39.6	60.1	15.0	171.6	23.8	38	37.3
56	MS Cobra	39.0	59.0	15.0	171.1	24.0	24	36.7
6	REEDER	38.9	58.6	15.3	171.4	25.1	39	38.0
52	LCS Dual	38.5	59.2	14.9	169.8	25.8	35	35.6
19	MT 2013	38.5	60.1	15.0	168.9	24.1	14	35.0
14	WB 9879 CLP	38.4	58.9	15.8	172.8	25.6	0	32.3
54	MS Ranchero	38.3	57.7	14.6	171.5	23.2	21	35.1
8	CHOTEAU	38.1	58.4	15.3	174.0	23.9	7	33.4
18	MT 2007	38.0	59.3	15.0	169.1	21.5	36	36.1
4	CORBIN	37.7	58.6	15.8	170.4	25.5	5	33.3
1	SY INGMAR	37.6	60.0	15.3	172.7	23.9	29	35.2
49	ND HERON	37.3	60.0	15.5	169.6	24.2	21	38.1
57	SY Longmire	36.9	59.5	15.6	170.7	25.3	16	34.3
2	SY ROCKFORD	36.8	59.1	15.4	172.7	24.5	31	34.8
15	MT SIDNEY	36.8	60.2	15.5	171.6	22.9	11	37.7
3	WB GUNNISON	36.8	59.3	14.4	172.4	25.2	6	34.9
7	MCNEAL	36.7	57.7	15.3	173.3	26.2	32	32.0
60	AP Gunsmoke CL2	35.9	58.3	16.7	170.5	22.2	51	37.0
11	LANNING	35.3	57.2	15.5	168.5	22.9	45	36.8
64	WB 9668	34.7	59.8	16.4	169.0	21.2	9	35.7
55	AAC Concord	34.7	58.7	15.7	172.5	27.0	4	31.7
58	SY 611 CL2	33.5	59.6	15.3	171.6	21.9	28	35.9
5	THATCHER	29.3	57.1	15.8	176.1	31.8	22	31.0
MEAN (n=64)		39.4	58.9	15.3	171.3	24.5	19	35.1
C.V.		7.1	0.7	1.5	0.4	4.1	43.2	3.9
PROBABILITY(LINE)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)		4.8	0.8	0.4	1.1	1.7	14	2.4

1) GLD=green leaf duration (stay-green)

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

20221 ADVANCED SPRING WHEAT NURSERY, SIDNEY (DRY), (Collaborator : Chengci Chen, EARC)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)
21	MT 2030	53.8	63.7	12.9	180.7	29.2
16	MT 1809	53.5	61.9	13.3	181.6	30.8
12	NS PRESSER CLP	50.5	60.1	12.5	184.2	30.7
9	VIDA	49.8	61.6	12.7	182.9	29.3
18	MT 2007	49.6	63.5	12.9	<u>177.6</u>	26.9
13	DAGMAR	49.4	63.5	14.1	179.2	29.3
23	MT 2049	49.4	62.4	13.4	178.6	27.7
51	LCS Ascent	49.4	<u>65.0</u>	13.0	178.9	28.3
17	MT 1939	49.0	64.0	13.0	180.3	28.1
62	WB 9516	48.9	64.2	12.5	182.6	29.5
11	LANNING	48.8	63.1	13.7	179.9	27.8
15	MT SIDNEY	48.2	64.2	13.2	179.6	29.0
58	SY 611 CL2	48.1	63.7	14.0	179.3	27.7
22	MT 2038	47.9	63.6	13.1	180.7	31.2
63	WB 9929	47.8	60.6	14.2	181.9	30.2
6	REEDER	47.5	62.8	13.4	182.3	31.8
56	MS Cobra	47.3	63.7	13.7	180.3	29.0
19	MT 2013	47.1	64.4	14.0	179.2	30.7
50	ROCKER	46.8	63.0	13.5	183.6	30.0
26	MT 2063	46.8	62.9	13.1	180.3	28.5
24	MT 2050	46.6	62.6	13.4	181.9	28.8
20	MT 2022	46.6	64.5	13.3	178.0	29.4
2	SY ROCKFORD	46.5	62.9	13.2	183.0	29.0
52	LCS Dual	46.5	63.8	12.7	179.7	28.5
60	AP Gunsmoke CL2	46.1	62.7	13.7	181.0	26.9
53	LCS HammerAX	45.8	63.5	13.1	180.7	27.4
59	AP Smith	45.6	63.6	13.9	182.4	26.5
8	CHOTEAU	45.5	62.0	13.4	182.7	28.7
61	WB 9719	45.2	64.9	13.3	182.6	28.6
14	WB 9879 CLP	44.4	63.3	13.8	181.2	28.1
7	MCNEAL	44.2	61.8	13.7	183.3	30.4
4	CORBIN	44.1	63.0	13.6	180.3	28.3
49	ND HERON	43.8	64.7	14.3	178.0	28.9
25	MT 2054	43.7	63.4	13.4	180.0	30.8
57	SY Longmire	43.1	63.8	13.5	180.3	28.3
1	SY INGMAR	42.5	64.3	13.9	181.3	27.9
54	MS Ranchero	42.0	62.6	12.9	182.3	31.4
64	WB 9668	41.6	63.6	<u>14.9</u>	177.7	26.4
3	WB GUNNISON	41.2	63.1	13.3	182.2	27.3
55	AAC Concord	39.5	62.5	14.1	183.9	31.9
10	DUCLAIR	39.4	61.8	13.5	180.0	29.2
5	THATCHER	30.3	60.6	14.2	185.9	<u>34.7</u>
MEAN (n=64)		46.2	63.2	13.5	181.0	29.0
C.V.		3.4	0.4	2.4	0.4	4.9
PROBABILITY(LINE)		<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)		2.7	0.4	0.5	1.1	2.3

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, SIDNEY (IRRIGATION), (Collaborator : Chengci Chen, EARC)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)
52	LCS Dual	<u>95.2</u>	65.5	13.5	179.0	34.4
21	MT 2030	95.1	64.2	14.1	178.7	32.8
61	WB 9719	93.7	<u>67.0</u>	13.9	180.3	31.6
51	LCS Ascent	93.7	65.8	13.6	177.7	32.9
60	AP Gunsmoke CL2	93.0	64.4	15.2	180.0	33.6
50	ROCKER	92.7	64.3	14.0	180.7	33.7
56	MS Cobra	92.4	64.9	14.6	179.3	33.9
57	SY Longmire	92.0	65.0	14.2	179.3	33.2
54	MS Ranchero	91.8	64.3	13.5	182.0	36.2
62	WB 9516	91.5	65.7	13.1	179.3	33.8
58	SY 611 CL2	91.5	65.2	14.2	178.7	30.3
22	MT 2038	91.4	63.6	15.0	178.7	36.1
53	LCS HammerAX	90.5	64.6	13.8	178.3	29.8
10	DUCLAIR	89.9	63.5	13.8	177.7	35.3
17	MT 1939	89.5	64.5	13.8	178.0	33.1
24	MT 2050	89.0	63.7	14.3	180.0	33.5
13	DAGMAR	88.5	64.8	14.3	178.3	35.3
1	SY INGMAR	88.4	65.7	14.1	179.7	32.3
16	MT 1809	88.1	63.1	14.4	180.3	34.8
2	SY ROCKFORD	87.8	63.9	14.2	182.0	33.7
11	LANNING	87.8	63.8	14.6	178.0	33.5
19	MT 2013	86.6	65.3	14.2	178.0	34.8
23	MT 2049	86.5	63.5	14.5	178.0	31.5
14	WB 9879 CLP	86.1	64.8	13.4	180.0	34.0
26	MT 2063	85.8	64.4	12.9	178.7	33.2
8	CHOTEAU	85.5	64.0	14.0	179.7	35.4
63	WB 9929	85.4	63.1	14.4	180.0	34.2
59	AP Smith	84.4	64.8	14.2	180.7	30.2
25	MT 2054	84.2	63.6	14.7	179.3	37.4
18	MT 2007	83.9	64.3	13.9	177.7	33.0
49	ND HERON	83.9	65.8	14.6	177.3	34.4
7	MCNEAL	83.5	63.7	14.0	180.7	33.1
6	REEDER	82.4	64.5	14.2	179.3	34.8
15	MT SIDNEY	82.1	65.3	14.3	178.7	31.5
9	VIDA	81.8	63.5	14.0	180.3	34.2
64	WB 9668	81.7	64.3	15.1	178.0	26.8
12	NS PRESSER CLP	81.1	61.9	13.9	182.7	36.6
20	MT 2022	80.5	65.0	14.0	177.3	32.9
55	AAC Concord	79.3	64.0	15.3	181.3	37.6
4	CORBIN	78.8	64.1	14.3	178.7	33.7
3	WB GUNNISON	76.3	63.8	13.8	180.0	31.1
5	THATCHER	75.6	63.8	14.5	183.7	42.1
MEAN (n=64)		86.5	64.4	14.3	179.2	33.7
C.V.		4.2	0.3	2.6	0.3	3.8
PROBABILITY(LINE)		<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)		6.2	0.3	0.7	0.9	2.2

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, FORT BENTON (DRY), (Collaborator : Nutrien)

ENTRY	ID	YIELD (BU/AC)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAW FLY CUT (%)
17	MT 1939	<u>35.4</u>	15.2	28.1	23
26	MT 2063	34.6	14.6	27.7	23
9	VIDA	32.5	15.0	27.8	25
25	MT 2054	32.3	15.5	28.5	13
8	CHOTEAU	32.1	15.4	25.9	15
24	MT 2050	32.1	15.1	27.3	20
23	MT 2049	32.1	15.8	26.7	70
13	DAGMAR	31.8	15.8	27.7	15
14	WB 9879 CLP	31.7	16.1	28.1	<u>5</u>
50	ROCKER	31.7	15.6	27.4	23
16	MT 1809	31.7	15.5	27.4	40
21	MT 2030	31.3	16.2	26.6	80
3	WB GUNNISON	30.9	14.6	27.7	28
18	MT 2007	30.7	15.0	27.7	75
20	MT 2022	30.5	14.9	26.9	23
10	DUCLAIR	30.4	14.9	27.6	13
22	MT 2038	30.0	16.4	29.2	48
57	SY Longmire	29.7	16.8	26.2	13
62	WB 9516	29.4	14.2	27.7	55
61	WB 9719	29.2	15.8	26.8	85
7	MCNEAL	28.8	15.7	29.1	70
12	NS PRESSER CLP	28.6	15.1	28.5	80
11	LANNING	28.6	16.9	27.1	80
54	MS Ranchero	28.5	15.3	27.5	80
55	AAC Concord	28.5	15.6	29.0	<u>5</u>
63	WB 9929	27.0	15.5	28.2	65
19	MT 2013	26.0	14.9	28.4	20
4	CORBIN	25.8	15.2	28.0	20
49	ND HERON	25.8	15.8	27.9	70
58	SY 611 CL2	25.8	15.8	25.8	80
6	REEDER	25.6	15.8	28.1	70
51	LCS Ascent	24.8	14.6	27.7	75
15	MT SIDNEY	24.5	16.1	25.9	75
60	AP Gunsmoke CL2	24.3	<u>17.5</u>	26.2	75
52	LCS Dual	23.4	15.8	28.3	65
56	MS Cobra	23.3	15.5	27.2	75
64	WB 9668	23.2	16.7	26.5	65
1	SY INGMAR	23.1	16.2	27.0	70
53	LCS HammerAX	23.1	16.0	27.4	75
59	AP Smith	21.9	16.1	25.3	70
2	SY ROCKFORD	21.9	15.9	28.3	80
5	THATCHER	19.7	15.8	33.9	80
MEAN (n=64)		29.0	1 rep	27.6	44
C.V.		6.6	1 rep	3.6	19.3
PROBABILITY(LINE)		<0.001	1 rep	<0.001	<0.001
LSD(0.05)		3.3	1 rep	1.7	17

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, HINGHAM (DRY), (Collaborator : 2nd Nature Seeds)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAW FYL CUT (1-9)
3	WB GUNNISON	<u>34.9</u>	59.9	13.9	23.2	1.1
16	MT 1809	34.3	59.3	15.8	22.2	1.2
17	MT 1939	33.7	60.3	14.1	23.4	2.4
12	NS PRESSER CLP	33.5	59.5	14.7	24.3	1.2
50	ROCKER	33.3	61.4	13.2	23.6	1.0
20	MT 2022	33.1	60.8	14.6	20.5	3.3
61	WB 9719	32.8	<u>62.6</u>	13.5	22.9	2.1
19	MT 2013	31.2	61.3	14.7	22.7	1.4
63	WB 9929	31.1	59.6	13.6	25.5	1.7
62	WB 9516	30.5	61.7	13.9	23.2	1.6
26	MT 2063	30.4	60.8	14.2	21.6	1.7
15	MT SIDNEY	29.2	60.6	15.6	21.7	1.4
55	AAC Concord	29.2	59.3	14.7	26.2	<u>0.9</u>
13	DAGMAR	28.9	60.1	15.3	21.8	1.3
54	MS Ranchero	28.8	59.8	12.8	21.7	1.7
6	REEDER	28.7	60.2	14.6	22.5	1.9
7	MCNEAL	28.6	59.5	15.6	22.9	1.4
9	VIDA	28.5	60.1	15.4	23.4	<u>0.9</u>
18	MT 2007	28.1	60.5	14.9	21.9	2.0
52	LCS Dual	28.1	60.4	14.7	22.8	1.4
11	LANNING	27.2	59.8	15.1	21.4	2.6
49	ND HERON	27.1	61.9	15.5	21.8	2.3
4	CORBIN	27.1	60.6	15.4	21.9	1.1
10	DUCLAIR	27.0	59.0	16.0	22.0	1.3
23	MT 2049	26.6	59.4	15.5	18.6	1.3
14	WB 9879 CLP	25.9	59.9	15.7	22.2	<u>0.9</u>
22	MT 2038	25.8	59.6	14.3	22.7	1.5
21	MT 2030	25.2	60.4	15.0	20.9	2.3
24	MT 2050	25.2	59.4	14.0	21.8	1.3
59	AP Smith	24.3	60.5	14.9	20.4	1.4
8	CHOTEAU	24.3	59.7	15.6	23.4	1.4
57	SY Longmire	24.0	60.5	15.8	21.5	1.4
58	SY 611 CL2	24.0	61.4	15.4	19.7	1.5
53	LCS HammerAX	23.9	61.1	14.5	20.9	1.7
5	THATCHER	23.6	59.4	14.3	26.7	<u>0.9</u>
64	WB 9668	23.6	61.4	16.7	20.2	2.0
25	MT 2054	23.4	59.9	15.0	24.6	<u>0.9</u>
51	LCS Ascent	23.2	61.8	13.5	21.6	2.1
1	SY INGMAR	22.4	61.0	15.4	19.9	1.4
2	SY ROCKFORD	22.3	58.9	15.2	20.9	1.3
56	MS Cobra	19.7	60.8	15.1	22.4	1.5
60	AP Gunsmoke CL2	17.7	59.8	16.6	19.1	1.8
MEAN (n=64)		27.6	60.3	15.0	22.3	1.5
C.V.		11.4	0.7	1 rep	5.1	33.2
PROBABILITY(LINE)		<0.001	<0.001	1 rep	<0.001	<0.001
LSD(0.05)		5.5	0.7	1 rep	1.9	0.8

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, BILLINGS (DRY), (Collaborator : Nutrien)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)
26	MT 2063	<u>60.2</u>	61.6	10.7	29.1
16	MT 1809	59.8	60.0	12.9	31.3
3	WB GUNNISON	59.5	62.0	11.9	30.3
64	WB 9668	59.4	61.5	13.0	25.8
62	WB 9516	58.7	61.7	12.5	30.2
63	WB 9929	57.9	60.6	11.9	31.5
14	WB 9879 CLP	57.8	60.4	13.0	29.1
50	ROCKER	57.5	62.3	12.2	31.7
24	MT 2050	57.4	60.1	12.7	30.1
17	MT 1939	57.1	60.6	12.3	31.1
9	VIDA	56.8	61.3	12.4	32.9
8	CHOTEAU	56.8	60.6	12.6	30.2
54	MS Ranchero	56.8	60.3	12.0	31.1
4	CORBIN	56.3	61.3	12.2	29.1
10	DUCLAIR	56.1	60.0	12.1	30.3
15	MT SIDNEY	55.0	61.4	11.8	29.1
12	NS PRESSER CLP	54.9	60.0	12.1	32.6
57	SY Longmire	54.8	61.6	12.9	29.1
7	MCNEAL	54.3	60.6	11.7	33.3
51	LCS Ascent	54.2	61.6	12.2	31.0
23	MT 2049	54.1	59.7	14.0	30.0
58	SY 611 CL2	54.0	61.6	12.5	27.9
53	LCS HammerAX	53.8	61.3	11.4	29.5
6	REEDER	53.3	60.8	12.4	32.9
21	MT 2030	53.2	60.5	12.6	31.0
61	WB 9719	53.2	61.8	12.4	29.6
60	AP Gunsmoke CL2	52.8	61.7	12.9	28.4
18	MT 2007	52.1	60.4	13.3	31.5
25	MT 2054	52.0	60.7	12.4	33.7
13	DAGMAR	52.0	61.5	12.7	31.4
52	LCS Dual	51.8	61.0	11.5	29.6
20	MT 2022	51.6	61.2	12.7	29.7
55	AAC Concord	51.2	59.6	13.0	33.9
59	AP Smith	50.9	61.8	13.7	25.9
11	LANNING	50.3	59.7	13.2	30.0
1	SY INGMAR	50.1	62.1	13.1	29.8
56	MS Cobra	49.6	61.2	12.2	29.6
22	MT 2038	48.9	59.9	13.1	30.9
2	SY ROCKFORD	47.6	60.1	12.7	31.1
19	MT 2013	47.4	60.3	12.6	33.2
5	THATCHER	44.1	57.5	11.5	<u>39.2</u>
49	ND HERON	42.5	60.5	13.7	31.9
MEAN (n=64)		53.9	60.8	12.6	30.8
C.V.		5.3	0.7	1 rep	3.4
PROBABILITY(LINE)		<0.001	<0.001	1 rep	<0.001
LSD(0.05)		4.9	0.8	1 rep	1.8

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 ADVANCED SPRING WHEAT NURSERY, WILLISTON (DRY), (Collaborator : Gautam Pradhan, NDSU)

ENTRY	ID	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)
51	LCS Ascent	63.1	60.2	15.0	182.0	28.0
57	SY Longmire	61.7	58.8	14.7	185.7	27.9
1	SY INGMAR	61.6	61.1	14.2	184.0	26.2
23	MT 2049	61.2	59.0	15.1	183.0	27.6
24	MT 2050	61.2	59.5	14.8	185.3	28.6
25	MT 2054	61.0	60.0	15.1	183.3	31.0
17	MT 1939	60.4	60.9	15.3	184.0	28.2
53	LCS HammerAX	60.2	61.3	15.0	182.3	27.2
50	ROCKER	59.1	62.2	15.3	184.7	27.3
62	WB 9516	58.7	61.5	14.1	185.0	28.4
9	VIDA	58.2	58.7	14.7	186.7	27.6
12	NS PRESSER CLP	58.1	57.1	15.1	188.0	29.7
18	MT 2007	57.8	60.3	14.8	182.3	28.6
8	CHOTEAU	57.8	59.7	15.5	184.3	28.3
2	SY ROCKFORD	57.2	59.6	14.2	189.7	30.3
52	LCS Dual	56.9	62.0	14.6	184.3	27.7
11	LANNING	56.7	60.7	15.6	187.3	29.7
16	MT 1809	56.7	59.5	14.8	185.0	27.4
6	REEDER	56.2	57.5	15.2	187.7	30.1
14	WB 9879 CLP	55.5	61.1	15.5	185.0	28.5
20	MT 2022	55.4	62.6	15.0	181.0	27.5
26	MT 2063	54.7	60.9	15.0	183.0	25.7
15	MT SIDNEY	54.6	60.6	14.3	184.3	27.8
22	MT 2038	54.5	59.0	15.3	187.3	30.3
61	WB 9719	54.1	62.4	14.5	186.3	26.7
54	MS Ranchero	53.7	60.0	14.9	191.7	28.0
7	MCNEAL	53.6	59.5	15.1	187.3	30.4
21	MT 2030	53.5	62.4	15.7	185.7	27.6
19	MT 2013	53.2	60.8	15.2	182.0	29.1
10	DUCLAIR	52.4	60.8	16.2	183.0	26.9
60	AP Gunsmoke CL2	52.1	61.2	15.5	184.0	26.3
4	CORBIN	52.0	61.2	15.6	182.0	26.9
3	WB GUNNISON	51.9	60.2	14.7	186.0	27.1
13	DAGMAR	51.6	62.0	14.0	182.0	27.9
58	SY 611 CL2	50.7	61.6	15.9	184.0	25.1
59	AP Smith	50.3	62.6	15.7	185.7	25.6
49	ND HERON	50.1	63.0	15.6	181.0	29.0
64	WB 9668	48.3	60.4	16.4	182.0	23.4
55	AAC Concord	46.9	59.0	16.2	188.3	30.2
56	MS Cobra	45.7	62.4	15.1	184.3	27.3
63	WB 9929	45.4	58.2	15.9	185.0	28.5
5	THATCHER	45.2	58.7	14.8	188.7	37.0
MEAN (n=64)		55.3	1 rep	15.2	184.5	28.1
C.V.		8.1	1 rep	1 rep	0.9	4.5
PROBABILITY(LINE)		<0.001	1 rep	1 rep	<0.001	<0.001
LSD(0.05)		7.8	1 rep	1 rep	2.7	2.1

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

**2022 OVERALL AGRONOMIC SUMMARY FOR SPRING WHEAT OFF-STATION NURSERY GROWN UNDER
RAIN FED CONDITION (10 LOCATIONS) ACROSS MONTANA**

ENTRY	VARIETY / LINE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	GRAIN PROTEIN (%)	HEADING DATE (JULIAN)	HEIGHT (INCHES)	SAWFLY CUT (%)	FALLING NO.
16	MT 1939	33.1	58.0	16.0	172.7	25.1	10	407
12	DAGMAR	31.5	58.6	16.3	172.3	25.5	3	409
24	MT 2054	30.6	58.2	15.9	172.7	27.1	3	409
22	MT 2049	30.0	57.1	15.9	171.3	23.9	25	399
9	DUCLAIR	29.2	57.1	16.5	173.0	25.2	3	374
19	MT 2022	29.0	58.9	15.8	171.7	24.9	11	424
23	MT 2050	28.9	57.6	15.5	173.3	24.1	5	397
8	VIDA	28.7	57.6	16.0	174.3	25.4	11	375
15	MT 1809	28.6	56.8	16.8	173.7	24.9	13	414
4	WB GUNNISON	28.1	58.5	15.8	174.0	24.0	2	427
18	MT 2013	28.0	58.5	16.2	171.7	26.2	10	454
25	MT 2063	27.9	58.4	15.9	173.0	24.7	9	377
13	WB9879CLP	27.9	57.4	16.5	174.7	24.2	2	418
11	NS PRESSER CLP	27.7	56.4	16.1	176.0	26.3	16	368
20	MT 2030	27.6	57.6	15.9	171.7	23.9	19	431
14	MT SIDNEY	27.0	58.3	16.4	173.0	24.5	25	399
17	MT 2007	26.9	57.3	16.1	170.3	24.8	26	409
10	LANNING	26.7	56.8	16.7	170.3	24.1	33	401
7	CHOTEAU	26.6	57.3	16.5	175.3	24.7	4	394
21	MT 2038	26.6	58.0	16.4	170.7	26.0	13	441
6	REEDER	26.4	57.7	16.4	173.3	25.6	22	394
5	CORBIN	26.3	57.8	16.9	173.3	25.7	4	392
1	BRENNAN	26.2	59.4	16.7	172.7	24.0	24	448
2	SY SOREN	24.8	57.8	17.0	173.3	23.6	22	447
3	SY INGMAR	24.3	57.0	17.0	176.3	24.6	25	456
MEAN		27.9	57.8	16.3	173	24.9	14	411
C.V.		11.4	1.6	2.7	0.4	4.0	79.4	4.1
PROBABILITY (LINE)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD (0.05)		2.8	0.8	0.4	1.3	0.9	14	24
No. of environments		10	10	10	1	10	5	4

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

**2022 OVERALL AGRONOMIC SUMMARY FOR SPRING WHEAT OFF-STATION NURSERY GROWN UNDER IRRI /
HIGH RAINFALL CONDITION (3 LOCATIONS INCLUDING KALISPELL) ACROSS MONTANA**

ENTRY	VARIETY / LINE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	GRAIN PROTEIN (%)	HEIGHT (INCHES)	FALLING NO.
20	MT 2030	<u>106.8</u>	62.1	13.7	34.9	409
23	MT 2050	105.5	61.8	13.8	36.1	379
18	MT 2013	104.1	62.2	14.1	37.4	<u>416</u>
25	MT 2063	103.2	60.4	13.2	34.8	364
13	WB9879CLP	103.1	61.7	13.6	35.2	385
22	MT 2049	103.0	61.3	13.7	34.0	355
16	MT 1939	103.0	62.1	13.4	34.9	375
6	REEDER	101.5	61.8	<u>14.3</u>	<u>39.2</u>	358
12	DAGMAR	101.2	61.6	13.9	35.5	363
17	MT 2007	101.1	61.9	13.3	35.4	348
2	SY SOREN	100.9	62.7	13.8	33.4	359
9	DUCLAIR	100.4	60.7	13.7	35.9	357
7	CHOTEAU	99.4	60.8	13.6	35.8	366
15	MT 1809	99.4	60.8	13.6	36.1	348
24	MT 2054	98.9	61.4	13.9	38.8	357
21	MT 2038	98.5	60.9	14.2	35.7	380
19	MT 2022	98.1	61.7	13.7	34.4	383
10	LANNING	96.6	61.7	14.1	33.7	357
4	WB GUNNISON	94.8	61.4	13.6	34.8	377
8	VIDA	94.2	60.2	14.0	36.7	348
3	SY INGMAR	93.7	61.8	<u>14.3</u>	33.8	354
14	MT SIDNEY	92.5	61.5	13.6	34.2	357
1	BRENNAN	92.3	<u>62.8</u>	13.8	32.6	376
5	CORBIN	91.0	60.6	<u>14.3</u>	36.0	368
11	NS PRESSER CLP	87.6	58.8	13.7	37.9	335
MEAN		98.8	61.4	13.8	35.5	367
C.V.		5.9	1.5	3.2	3.9	3.3
PROBABILITY (LINE)		<0.05	<0.01	ns	<0.001	<0.001
LSD (0.05)		9.6	1.5	-	2.3	19
No. of environments		3	3	3	3	1

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OVERALL AGRONOMIC SUMMARY FOR SPRING WHEAT OFF-STATION NURSERY GROWN IN 13 ENVIRONMENTS, INCLUDING 10 DRYLAND AND 3 IRRIGATED ENVIRONMENTS ACROSS MONTANA

ENTRY	VARIETY / LINE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	GRAIN PROTEIN (%)	HEADING DATE (JULIAN)	HEIGHT (INCHES)	SAWFLY CUT (%)	FALLING NO.
16	MT 1939	<u>49.2</u>	59.0	15.4	172.7	27.4	10	400
12	DAGMAR	47.6	59.3	15.7	172.3	27.8	3	399
22	MT 2049	46.8	58.1	15.4	171.3	26.2	25	390
23	MT 2050	46.5	58.6	15.1	173.3	26.9	5	394
24	MT 2054	46.4	58.9	15.5	172.7	<u>29.8</u>	3	399
20	MT 2030	45.9	58.6	15.3	171.7	26.5	19	426
9	DUCLAIR	45.6	58.0	15.9	173.0	27.6	3	371
18	MT 2013	45.6	59.3	15.7	171.7	28.8	10	<u>447</u>
25	MT 2063	45.3	58.9	15.3	173.0	27.0	9	375
13	WB9879CLP	45.2	58.4	15.8	174.7	26.7	<u>2</u>	411
19	MT 2022	45.0	59.5	15.3	171.7	27.1	11	416
15	MT 1809	44.9	57.7	16.0	173.7	27.5	13	401
17	MT 2007	44.0	58.3	15.4	<u>170.3</u>	27.3	26	397
8	VIDA	43.8	58.2	15.5	174.3	28.0	11	370
6	REEDER	43.7	58.6	15.9	173.3	28.7	22	387
4	WB GUNNISON	43.5	59.1	15.3	174.0	26.5	<u>2</u>	417
7	CHOTEAU	43.4	58.1	15.8	175.3	27.2	4	389
21	MT 2038	43.2	58.7	15.9	170.7	28.3	13	429
10	LANNING	42.8	57.9	16.1	<u>170.3</u>	26.3	33	392
2	SY SOREN	42.4	58.9	16.3	173.3	25.9	22	429
14	MT SIDNEY	42.1	59.0	15.8	173.0	26.8	25	390
11	NS PRESSER CLP	41.5	57.0	15.6	176.0	28.9	16	361
1	BRENNAN	41.4	<u>60.2</u>	16.0	172.7	26.0	24	434
5	CORBIN	41.3	58.5	16.3	173.3	28.1	4	387
3	SY INGMAR	40.3	58.1	<u>16.4</u>	176.3	26.7	25	435
MEAN		44.3	58.6	15.7	173	27.4	14	402
C.V.		9.4	1.6	2.9	0.4	4.1	79.4	4.4
PROBABILITY (LINE)		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD (0.05)		3.2	0.7	0.3	1.3	0.9	14	22
No. of environments		13	13	13	1	13	5	5

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : KALISPELL (HIGH RAINFALL) : 9905

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	KERNEL WEIGHT (g)	LODGING (%)	FALLING NO.
20	MT 2030	LANNING/MT 1338	119.1	62.8	15.0	35.5	40.7	62	409
16	MT 1939	LANNING//MT1018//CHOTEAU/YELLOWSTONE	117.0	62.5	14.2	33.3	41.0	0	375
18	MT 2013	MT 1542/ND819	116.7	63.5	15.0	35.8	41.0	5	416
13	WB9879CLP	WB9879CLP	116.0	62.2	14.4	35.8	36.7	0	385
23	MT 2050	MT 1542/MT 1415	115.7	62.0	14.6	34.8	42.2	0	379
6	ND 695	REEDER	115.4	61.7	15.3	39.3	38.1	7	358
4	BZ 92413R	WB GUNNISON	115.2	61.9	13.7	34.8	43.8	0	377
2	AGRIPR 14	SY SOREN	114.8	64.0	14.9	31.8	35.7	0	359
7	PI 633974	CHOTEAU	114.1	60.9	14.6	35.0	35.7	28	366
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	113.7	60.7	14.7	35.0	32.4	98	364
17	MT 2007	LANNING/ND819	111.5	62.2	14.2	34.0	38.7	0	348
22	MT 2049	LANNING/MT 1415	110.9	61.4	15.2	32.7	41.9	8	355
12	PI 690450	DAGMAR	110.2	61.5	15.3	36.1	40.0	97	363
24	MT 2054	LANNING/MT 1528	107.7	61.0	14.7	39.1	48.5	38	357
21	MT 2038	LANNING/MT1133//MT0744/MT0614	106.0	61.4	15.4	37.0	41.4	88	380
9	PI 660981	DUCLAIR	105.1	60.6	14.9	34.9	38.3	38	357
10	PI 676978	LANNING	104.3	62.5	15.5	34.3	40.8	33	357
15	MT 1809	VIDA/M0 09/3-4	104.0	59.7	15.4	36.7	35.1	95	348
3	AGRIPR141	SY INGMAR	102.2	62.9	14.8	30.6	36.6	0	354
19	MT 2022	MT 1401/ND 819	99.0	60.9	15.0	34.3	40.1	96	383
5	BZ 996434	CORBIN	94.1	60.2	14.9	36.6	42.2	88	368
1	AGRIPR 10	BRENNAN	94.0	62.2	15.0	30.8	39.2	0	376
8	PI 642366	VIDA	93.9	58.1	15.6	36.4	32.9	98	348
14	MT 1716	MT SIDNEY	92.5	60.0	14.7	34.2	28.4	95	357
11	PI 679964	NS PRESSER CLP	89.1	56.6	14.5	37.8	34.4	87	335
MEAN			107.3	61.3	14.9	35.1	38.6	42	367
C.V.			7.3	1.8	1.9	3.6	4.5	49.2	3.3
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)			11.5	1.4	0.5	1.9	2.6	35	19

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : HUNTLEY (DRY) : 9908

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)
13	WB9879CLP	WB9879CLP	<u>39.3</u>	54.7	16.3	174.7	35.3
9	PI 660981	DUCLAIR	35.1	56.0	16.0	173.0	34.5
23	MT 2050	MT 1542/MT 1415	35.0	55.2	15.3	173.3	34.9
24	MT 2054	LANNING/MT 1528	33.9	55.5	15.8	172.7	37.4
14	MT 1716	MT SIDNEY	31.9	56.0	16.3	173.0	35.0
16	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	31.8	57.2	15.8	172.7	35.6
12	PI 690450	DAGMAR	31.0	56.2	16.1	172.3	36.1
2	AGRIPR 14	SY SOREN	30.7	56.3	16.2	173.3	34.6
4	BZ 92413R	WB GUNNISON	29.3	57.2	16.0	174.0	32.3
3	AGRIPR141	SY INGMAR	29.2	55.6	16.6	176.3	34.4
5	BZ 996434	CORBIN	28.6	53.4	<u>17.2</u>	173.3	36.7
7	PI 633974	CHOTEAU	28.6	56.1	16.0	175.3	34.0
22	MT 2049	LANNING/MT 1415	28.6	55.2	15.4	171.3	32.8
18	MT 2013	MT 1542/ND819	28.4	55.8	16.3	171.7	<u>40.2</u>
1	AGRIPR 10	BRENNAN	26.2	<u>59.1</u>	15.5	172.7	33.3
8	PI 642366	VIDA	25.8	56.1	16.3	174.3	36.6
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	25.7	55.7	15.6	173.0	35.7
15	MT 1809	VIDA/M0 09/3-4	25.0	55.0	16.9	173.7	36.0
10	PI 676978	LANNING	22.8	54.6	16.3	<u>170.3</u>	33.3
19	MT 2022	MT 1401/ND 819	21.9	57.1	16.0	171.7	37.0
6	ND 695	REEDER	20.7	54.1	16.8	173.3	37.9
11	PI 679964	NS PRESSER CLP	20.4	53.9	16.9	176.0	36.9
17	MT 2007	LANNING/ND819	19.7	56.2	15.6	<u>170.3</u>	34.0
21	MT 2038	LANNING/MT1133//MT0744/MT0614	17.9	56.0	16.5	170.7	35.2
20	MT 2030	LANNING/MT 1338	15.9	57.4	16.1	171.7	33.3
MEAN			27.3	55.8	16.2	173	35.3
C.V.			11.7	1.1	1.4	0.4	3.8
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)			5.6	1.1	0.4	1.3	2.2

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : TURNER (DRY) : 9951

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAWFLY CUT (%)	FALLING NO.
16	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	<u>46.1</u>	59.3	14.9	23.6	4.4	384
22	MT 2049	LANNING/MT 1415	42.6	58.3	15.5	21.8	8.8	383
8	PI 642366	VIDA	40.5	59.2	15.2	24.2	8.7	374
10	PI 676978	LANNING	40.4	59.1	16.1	21.8	9.8	370
15	MT 1809	VIDA/M0 09/3-4	40.3	58.7	15.5	22.1	5.2	391
17	MT 2007	LANNING/ND819	40.1	59.5	15.0	23.1	9.1	387
20	MT 2030	LANNING/MT 1338	39.2	59.8	14.5	21.6	6.5	401
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	38.8	60.2	14.8	22.9	5.1	363
12	PI 690450	DAGMAR	38.2	59.4	15.5	23.0	5.2	378
19	MT 2022	MT 1401/ND 819	37.9	60.1	14.9	21.4	5.3	391
21	MT 2038	LANNING/MT1133//MT0744/MT0614	37.7	59.1	15.7	23.4	9.5	411
6	ND 695	REEDER	37.6	59.4	15.2	24.1	12.5	378
24	MT 2054	LANNING/MT 1528	37.1	59.3	15.5	<u>25.2</u>	2.5	397
14	MT 1716	MT SIDNEY	37.0	60.4	16.0	23.8	8.4	399
4	BZ 92413R	WB GUNNISON	36.3	60.4	14.8	22.7	3.0	396
11	PI 679964	NS PRESSER CLP	36.0	59.5	15.3	24.0	4.9	392
18	MT 2013	MT 1542/ND819	35.8	60.4	15.2	23.3	3.8	424
7	PI 633974	CHOTEAU	34.4	59.1	15.5	23.0	1.5	376
13	WB9879CLP	WB9879CLP	33.9	59.2	15.6	23.0	<u>1.1</u>	405
9	PI 660981	DUCLAIR	33.7	58.7	15.5	22.4	3.3	370
3	AGRIPR141	SY INGMAR	33.3	60.5	15.9	21.8	11.5	<u>436</u>
2	AGRIPR 14	SY SOREN	32.8	60.5	16.2	21.6	5.3	414
5	BZ 996434	CORBIN	32.6	60.2	14.9	22.5	3.6	381
1	AGRIPR 10	BRENNAN	32.4	<u>60.6</u>	<u>16.2</u>	20.8	3.8	432
23	MT 2050	MT 1542/MT 1415	32.1	59.1	14.3	22.4	4.9	391
MEAN			37.1	59.6	15.4	22.8	5.9	393
C.V.			5.3	0.5	2.6	3.2	50.5	2.8
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)			2.8	0.4	0.5	1.1	4.8	18

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : CHESTER (DRY) : 9953

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAWFLY CUT (%)	FALLING NO.
11	PI 679964	NS PRESSER CLP	<u>33.5</u>	54.1	16.0	24.7	9.0	383
16	MT 1939	LANNING//MT1018//CHOTEAU/YELLOWSTONE	32.8	55.6	16.1	22.8	4.9	414
12	PI 690450	DAGMAR	32.7	57.2	16.2	22.5	<u>0.0</u>	429
19	MT 2022	MT 1401/ND 819	31.7	57.8	15.9	22.1	7.3	436
9	PI 660981	DUCLAIR	31.3	54.4	16.6	22.9	2.3	387
20	MT 2030	LANNING/MT 1338	29.7	56.4	15.8	21.0	14.2	462
4	BZ 92413R	WB GUNNISON	29.2	56.5	15.1	21.2	1.4	440
15	MT 1809	VIDA/M0 09/3-4	29.2	54.6	<u>17.2</u>	23.2	3.4	425
8	PI 642366	VIDA	29.2	55.6	16.2	23.2	8.2	376
24	MT 2054	LANNING/MT 1528	29.0	56.3	16.0	<u>24.7</u>	1.5	423
18	MT 2013	MT 1542/ND819	28.7	57.0	16.1	22.7	6.4	458
17	MT 2007	LANNING/ND819	28.6	54.5	16.4	22.6	15.8	417
13	WB9879CLP	WB9879CLP	28.4	55.7	16.5	21.8	1.9	412
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	28.2	57.4	15.9	21.8	3.8	373
23	MT 2050	MT 1542/MT 1415	28.2	55.6	15.8	21.2	4.0	401
10	PI 676978	LANNING	28.1	54.9	16.8	21.4	13.7	407
22	MT 2049	LANNING/MT 1415	28.1	54.8	16.3	21.5	12.9	400
1	AGRIPR 10	BRENNAN	28.1	<u>57.9</u>	16.4	21.6	10.5	446
14	MT 1716	MT SIDNEY	28.1	56.9	16.7	22.2	5.9	380
5	BZ 996434	CORBIN	27.5	56.1	16.6	22.8	2.9	389
7	PI 633974	CHOTEAU	27.5	55.7	16.3	22.2	0.8	405
2	AGRIPR 14	SY SOREN	26.3	56.1	16.8	20.7	7.3	423
21	MT 2038	LANNING/MT1133//MT0744/MT0614	25.0	56.0	16.4	23.1	7.8	<u>468</u>
6	ND 695	REEDER	24.0	54.9	16.7	22.8	12.4	393
3	AGRIPR141	SY INGMAR	22.0	54.9	16.9	22.3	7.6	439
MEAN			28.6	55.9	16.3	22.4	6.6	415
C.V.			7.5	1.3	2.3	3.9	63.6	3.9
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)			3.3	1.1	0.4	1.4	6.5	27

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : LORING (DRY) : 9955

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAWFLY CUT (%)	FALLING NO.
16	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	<u>26.7</u>	58.9	14.2	20.8	1.6	422
23	MT 2050	MT 1542/MT 1415	26.3	57.8	13.8	22.4	2.3	399
22	MT 2049	LANNING/MT 1415	25.9	57.4	14.0	21.9	11.7	387
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	25.7	59.4	14.5	21.5	5.5	398
19	MT 2022	MT 1401/ND 819	25.4	59.1	14.4	21.2	1.1	421
12	PI 690450	DAGMAR	25.3	59.0	14.9	21.2	1.0	424
24	MT 2054	LANNING/MT 1528	25.2	59.5	14.0	<u>23.6</u>	2.7	418
6	ND 695	REEDER	25.0	58.9	14.5	21.6	10.6	407
18	MT 2013	MT 1542/ND819	24.8	59.1	<u>15.1</u>	22.6	4.5	<u>464</u>
5	BZ 996434	CORBIN	24.2	58.8	14.4	21.7	1.2	410
20	MT 2030	LANNING/MT 1338	24.1	57.9	14.0	21.1	5.6	411
8	PI 642366	VIDA	23.7	58.2	13.7	21.7	4.5	383
14	MT 1716	MT SIDNEY	23.3	58.8	14.3	20.7	8.5	409
11	PI 679964	NS PRESSER CLP	23.2	57.3	14.3	22.2	11.2	356
17	MT 2007	LANNING/ND819	22.8	58.9	14.2	21.2	12.9	412
3	AGRIPR141	SY INGMAR	22.8	59.1	14.9	21.1	13.2	450
21	MT 2038	LANNING/MT1133//MT0744/MT0614	22.7	59.1	14.4	21.3	0.9	419
15	MT 1809	VIDA/M0 09/3-4	22.5	57.2	14.6	21.5	6.9	433
13	WB9879CLP	WB9879CLP	22.4	58.6	14.7	21.0	<u>0.4</u>	441
1	AGRIPR 10	BRENNAN	22.3	59.6	14.8	20.2	8.4	445
2	AGRIPR 14	SY SOREN	22.3	58.3	<u>15.1</u>	20.1	8.4	451
4	BZ 92413R	WB GUNNISON	21.7	<u>59.9</u>	13.9	20.8	0.8	444
7	PI 633974	CHOTEAU	21.4	58.2	14.5	21.8	1.5	398
10	PI 676978	LANNING	20.3	57.9	14.9	20.6	12.1	397
9	PI 660981	DUCLAIR	19.9	57.8	14.9	20.2	0.9	369
MEAN			23.6	58.6	14.4	21.4	5.5	415
C.V.			7.4	0.6	1.5	3.5	54.7	3.1
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)			2.3	0.5	0.3	1.2	4.8	21

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : LOMA (DRY) : 9957

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAWFLY CUT (%)	FALLING NO.
12	PI 690450	DAGMAR	33.7	55.8	16.5	25.1	8.3	403
16	MT 1939	LANNING//MT1018//CHOTEAU/YELLOWSTONE	32.5	54.1	16.0	23.8	28.3	407
21	MT 2038	LANNING/MT1133//MT0744/MT0614	29.9	54.9	16.6	25.7	37.7	466
8	PI 642366	VIDA	29.9	54.4	15.9	25.2	30.2	368
20	MT 2030	LANNING/MT 1338	29.5	53.6	16.5	24.4	55.9	448
22	MT 2049	LANNING/MT 1415	29.4	54.0	15.8	23.2	75.7	427
4	BZ 92413R	WB GUNNISON	28.9	54.8	15.7	22.8	7.0	429
24	MT 2054	LANNING/MT 1528	28.8	54.4	15.9	23.6	6.9	399
19	MT 2022	MT 1401/ND 819	28.8	56.2	15.9	23.0	31.1	449
15	MT 1809	VIDA/M0 09/3-4	28.5	53.2	16.8	24.1	47.7	406
18	MT 2013	MT 1542/ND819	28.3	55.7	15.9	24.3	30.3	471
23	MT 2050	MT 1542/MT 1415	27.8	54.1	15.9	23.6	11.7	398
1	AGRIPR 10	BRENNAN	27.7	56.9	16.3	24.0	68.9	470
17	MT 2007	LANNING/ND819	27.1	53.8	15.8	23.4	68.5	421
9	PI 660981	DUCLAIR	26.9	54.0	16.7	25.1	7.2	370
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	26.6	54.5	15.9	23.5	27.7	375
14	MT 1716	MT SIDNEY	26.4	55.9	16.4	22.9	79.3	406
10	PI 676978	LANNING	26.1	53.1	16.9	22.6	81.0	431
2	AGRIPR 14	SY SOREN	25.9	53.7	17.0	23.4	64.5	500
13	WB9879CLP	WB9879CLP	25.8	54.8	16.8	22.3	7.4	413
7	PI 633974	CHOTEAU	25.6	54.4	16.6	23.9	14.9	398
5	BZ 996434	CORBIN	25.3	55.5	16.8	24.3	11.3	388
11	PI 679964	NS PRESSER CLP	25.2	52.0	16.1	25.4	53.3	339
6	ND 695	REEDER	24.4	54.7	16.1	24.4	66.4	397
3	AGRIPR141	SY INGMAR	23.8	53.8	16.7	24.4	72.2	497
MEAN			27.7	54.5	16.3	23.9	39.7	419
C.V.			6.4	0.9	1.1	4.7	22.9	3.9
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.01	<0.001	<0.001
LSD(0.05)			2.8	0.8	0.3	1.8	13.7	27

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : MOCCASIN (DRY) : 9970

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)
11	PI 679964	NS PRESSER CLP	<u>38.2</u>	60.9	15.2	26.0
16	MT 1939	LANNING//MT1018//CHOTEAU/YELLOWSTONE	37.6	61.1	15.8	24.7
22	MT 2049	LANNING/MT 1415	37.3	60.8	15.5	24.7
12	PI 690450	DAGMAR	37.3	61.6	15.5	27.3
19	MT 2022	MT 1401/ND 819	37.0	61.7	15.3	25.3
24	MT 2054	LANNING/MT 1528	37.0	61.8	15.6	<u>28.3</u>
8	PI 642366	VIDA	36.9	60.6	15.8	24.3
17	MT 2007	LANNING/ND819	36.7	61.2	15.7	25.3
20	MT 2030	LANNING/MT 1338	36.3	61.2	15.9	23.7
21	MT 2038	LANNING/MT1133//MT0744/MT0614	35.6	61.4	16.4	27.0
10	PI 676978	LANNING	35.3	<u>62.2</u>	16.1	25.3
15	MT 1809	VIDA/M0 09/3-4	35.0	60.5	16.6	24.3
6	ND 695	REEDER	34.4	62.1	15.9	24.3
9	PI 660981	DUCLAIR	34.3	60.4	16.3	25.7
14	MT 1716	MT SIDNEY	33.9	60.9	16.0	25.7
23	MT 2050	MT 1542/MT 1415	33.3	59.9	15.8	21.0
4	BZ 92413R	WB GUNNISON	32.2	60.9	16.2	24.3
7	PI 633974	CHOTEAU	31.5	60.4	16.9	23.7
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	30.2	61.4	16.8	23.0
1	AGRIPR 10	BRENNAN	30.2	62.0	17.2	26.0
18	MT 2013	MT 1542/ND819	28.3	61.0	16.8	26.3
13	WB9879CLP	WB9879CLP	27.0	60.2	17.5	22.0
2	AGRIPR 14	SY SOREN	26.2	61.5	17.6	23.3
5	BZ 996434	CORBIN	22.8	61.3	18.0	24.3
3	AGRIPR141	SY INGMAR	18.9	61.4	<u>19.2</u>	23.7
MEAN			32.9	61.1	16.4	24.8
C.V.			9.2	0.4	2.6	6.4
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.001
LSD(0.05)			4.7	0.4	0.6	2.6

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : DENTON (DRY) : 9971

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAWFLY CUT (%)
4	BZ 92413R	WB GUNNISON	<u>24.7</u>	60.2	15.0	22.7	<u>0</u>
15	MT 1809	VIDA/M0 09/3-4	24.2	57.9	15.9	24.3	4
9	PI 660981	DUCLAIR	24.1	58.5	16.1	24.9	1
16	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	23.2	60.7	15.0	23.9	12
12	PI 690450	DAGMAR	23.2	60.9	15.4	24.4	<u>0</u>
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	23.1	60.1	14.2	24.0	5
7	PI 633974	CHOTEAU	21.7	59.8	15.3	24.7	1
24	MT 2054	LANNING/MT 1528	21.5	60.9	15.6	<u>26.4</u>	1
11	PI 679964	NS PRESSER CLP	21.4	57.6	15.7	25.5	2
13	WB9879CLP	WB9879CLP	21.1	61.0	14.6	22.8	<u>0</u>
5	BZ 996434	CORBIN	20.7	60.2	15.7	24.5	1
19	MT 2022	MT 1401/ND 819	20.4	61.5	13.9	23.2	10
18	MT 2013	MT 1542/ND819	19.7	61.3	14.4	23.8	3
8	PI 642366	VIDA	19.4	60.1	14.7	23.7	2
23	MT 2050	MT 1542/MT 1415	17.6	60.0	13.8	21.9	1
20	MT 2030	LANNING/MT 1338	17.4	59.8	14.3	21.2	14
6	ND 695	REEDER	17.0	60.2	15.3	23.1	9
22	MT 2049	LANNING/MT 1415	16.0	58.9	15.5	21.3	17
17	MT 2007	LANNING/ND819	15.7	59.9	15.3	23.5	22
21	MT 2038	LANNING/MT1133//MT0744/MT0614	15.5	60.5	15.1	23.6	8
14	MT 1716	MT SIDNEY	15.4	60.5	15.4	22.3	23
2	AGRIPR 14	SY SOREN	14.3	61.0	15.2	21.8	22
1	AGRIPR 10	BRENNAN	13.6	<u>61.7</u>	<u>16.9</u>	22.0	28
3	AGRIPR141	SY INGMAR	13.5	61.1	15.5	22.7	18
10	PI 676978	LANNING	12.3	60.3	15.4	21.7	50
MEAN			19.1	60.2	15.2	23.4	10
C.V.			12.1	1.5	5.6	5.1	96.6
PROBABILITY (ENTRY)			<0.001	<0.001	<0.05	<0.001	<0.001
LSD(0.05)			3.9	1.4	1.4	1.9	16

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : GERALDINE (DRY) : 9972

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)
12	PI 690450	DAGMAR	<u>17.0</u>	59.1	17.3	16.4
23	MT 2050	MT 1542/MT 1415	15.7	56.9	16.9	18.6
16	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	15.4	58.0	17.3	18.2
9	PI 660981	DUCLAIR	14.8	57.4	18.0	19.1
4	BZ 92413R	WB GUNNISON	14.5	58.4	16.9	19.6
24	MT 2054	LANNING/MT 1528	14.5	58.3	17.4	18.5
13	WB9879CLP	WB9879CLP	14.2	56.0	17.6	20.0
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	13.8	58.8	16.8	18.1
19	MT 2022	MT 1401/ND 819	13.7	<u>59.2</u>	17.3	17.9
21	MT 2038	LANNING/MT1133//MT0744/MT0614	13.7	58.7	17.6	<u>20.5</u>
7	PI 633974	CHOTEAU	13.5	55.1	18.0	17.3
8	PI 642366	VIDA	13.0	57.1	17.2	17.4
20	MT 2030	LANNING/MT 1338	12.7	55.3	16.7	18.1
15	MT 1809	VIDA/M0 09/3-4	12.7	57.6	17.8	18.1
22	MT 2049	LANNING/MT 1415	12.1	56.9	17.6	17.7
18	MT 2013	MT 1542/ND819	11.5	57.0	17.5	19.7
14	MT 1716	MT SIDNEY	11.4	56.5	18.0	18.8
17	MT 2007	LANNING/ND819	11.1	57.6	17.6	17.7
11	PI 679964	NS PRESSER CLP	10.9	57.2	16.7	18.8
5	BZ 996434	CORBIN	10.7	58.0	18.8	19.0
10	PI 676978	LANNING	10.0	57.2	18.1	16.3
6	ND 695	REEDER	10.0	57.8	17.7	18.4
3	AGRIPR141	SY INGMAR	9.7	50.4	17.9	19.2
1	AGRIPR 10	BRENNAN	9.0	57.4	18.8	16.6
2	AGRIPR 14	SY SOREN	8.5	57.6	<u>19.1</u>	17.8
MEAN			12.6	57.2	17.6	18.3
C.V.			24.4	3.6	4.0	11.1
PROBABILITY (ENTRY)			<0.01	<0.01	<0.01	ns
LSD(0.05)			3.8	3.3	0.9	-

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : JUDITH GAP (DRY) : 9976

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)
16	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	45.9	58.3	18.2	27.3
22	MT 2049	LANNING/MT 1415	43.2	57.6	18.3	26.0
12	PI 690450	DAGMAR	43.0	58.7	19.1	28.3
1	AGRIPR 10	BRENNAN	42.0	60.0	18.5	27.3
11	PI 679964	NS PRESSER CLP	40.3	56.9	18.9	29.3
24	MT 2054	LANNING/MT 1528	40.2	59.4	18.3	29.0
6	ND 695	REEDER	39.9	58.7	18.7	26.7
3	AGRIPR141	SY INGMAR	39.6	58.1	19.0	25.7
18	MT 2013	MT 1542/ND819	39.6	59.6	18.4	28.3
8	PI 642366	VIDA	39.0	57.9	18.6	27.7
23	MT 2050	MT 1542/MT 1415	37.1	59.5	17.7	26.3
19	MT 2022	MT 1401/ND 819	36.7	58.1	18.8	27.7
20	MT 2030	LANNING/MT 1338	36.5	57.1	18.7	25.7
5	BZ 996434	CORBIN	36.0	58.3	19.2	28.3
21	MT 2038	LANNING/MT1133//MT0744/MT0614	35.8	57.9	18.7	29.3
9	PI 660981	DUCLAIR	35.7	57.8	18.6	26.7
15	MT 1809	VIDA/M0 09/3-4	35.7	56.8	19.2	27.7
17	MT 2007	LANNING/ND819	35.3	56.6	18.7	28.0
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	34.8	57.8	18.0	26.7
10	PI 676978	LANNING	34.7	54.8	18.9	27.0
7	PI 633974	CHOTEAU	34.6	57.6	19.1	27.7
14	MT 1716	MT SIDNEY	33.7	59.8	19.1	26.3
4	BZ 92413R	WB GUNNISON	33.6	60.0	17.7	26.0
13	WB9879CLP	WB9879CLP	32.6	57.7	18.9	25.7
2	AGRIPR 14	SY SOREN	31.3	57.6	19.5	24.7
MEAN			37.5	58.1	18.7	27.2
C.V.			11.4	2.1	3.2	4.2
PROBABILITY (ENTRY)			<0.01	<0.01	<0.01	<0.001
LSD(0.05)			6.7	1.7	0.7	1.8

bold : highest or earliest value within a column

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2022 OFF-STATION : BILLINGS (DRY) : 9994

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)
24	MT 2054	LANNING/MT 1528	<u>38.7</u>	56.7	15.1	<u>34.0</u>
16	MT 1939	LANNING//MT1018//CHOTEAU/YELLOWSTONE	38.6	57.0	16.3	30.2
19	MT 2022	MT 1401/ND 819	36.9	58.0	15.8	30.2
10	PI 676978	LANNING	36.5	53.9	17.1	30.6
22	MT 2049	LANNING/MT 1415	36.3	57.1	15.4	28.1
9	PI 660981	DUCLAIR	35.8	56.2	16.7	30.1
23	MT 2050	MT 1542/MT 1415	35.5	58.2	15.5	28.7
5	BZ 996434	CORBIN	35.0	56.5	17.1	32.9
18	MT 2013	MT 1542/ND819	34.7	57.6	16.1	31.2
20	MT 2030	LANNING/MT 1338	34.3	57.4	16.0	29.1
13	WB9879CLP	WB9879CLP	33.9	56.2	16.2	28.2
12	PI 690450	DAGMAR	33.6	58.1	16.1	31.0
15	MT 1809	VIDA/M0 09/3-4	32.7	56.1	17.2	28.0
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	32.3	<u>58.6</u>	16.2	29.9
17	MT 2007	LANNING/ND819	32.1	54.3	16.4	29.5
21	MT 2038	LANNING/MT1133//MT0744/MT0614	31.7	56.7	16.2	31.2
4	BZ 92413R	WB GUNNISON	31.0	56.3	16.6	27.2
6	ND 695	REEDER	30.9	55.9	16.9	32.2
3	AGRIPR141	SY INGMAR	30.5	54.7	17.4	30.2
1	AGRIPR 10	BRENNAN	30.3	58.5	16.3	28.5
2	AGRIPR 14	SY SOREN	29.6	55.0	<u>17.4</u>	28.2
8	PI 642366	VIDA	29.3	57.0	16.1	30.1
14	MT 1716	MT SIDNEY	29.1	57.0	16.2	27.6
11	PI 679964	NS PRESSER CLP	28.1	54.8	16.1	29.9
7	PI 633974	CHOTEAU	27.4	56.5	16.3	28.3
MEAN			33.0	56.6	16.4	29.8
C.V.			7.8	1.7	2.9	5.2
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.001
LSD(0.05)			4.5	1.7	0.8	2.5

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : HYSHAM (IRRI) : 9996

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)
23	MT 2050	MT 1542/MT 1415	<u>104.4</u>	62.7	12.2	33.3
20	MT 2030	LANNING/MT 1338	102.0	62.7	10.8	30.8
6	ND 695	REEDER	101.4	63.3	12.3	35.2
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	100.5	62.3	10.1	32.4
13	WB9879CLP	WB9879CLP	99.7	63.1	11.6	31.5
18	MT 2013	MT 1542/ND819	97.4	63.4	11.8	35.6
19	MT 2022	MT 1401/ND 819	97.4	63.5	11.0	32.4
21	MT 2038	LANNING/MT1133//MT0744/MT0614	97.0	62.3	11.3	31.0
24	MT 2054	LANNING/MT 1528	96.7	62.7	11.8	<u>38.1</u>
5	BZ 996434	CORBIN	96.3	62.7	12.2	32.3
17	MT 2007	LANNING/ND819	96.1	62.9	11.1	32.5
3	AGRIPR141	SY INGMAR	95.9	62.7	<u>12.6</u>	32.5
9	PI 660981	DUCLAIR	95.8	61.7	11.4	34.9
22	MT 2049	LANNING/MT 1415	94.6	61.9	11.4	31.8
16	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	94.4	63.2	10.9	33.5
12	PI 690450	DAGMAR	94.3	63.4	10.9	31.8
11	PI 679964	NS PRESSER CLP	93.8	62.5	11.4	37.0
7	PI 633974	CHOTEAU	93.6	62.9	11.2	32.5
2	AGRIPR 14	SY SOREN	93.4	63.5	11.4	31.0
15	MT 1809	VIDA/M0 09/3-4	93.1	62.7	10.7	34.6
8	PI 642366	VIDA	92.5	63.0	11.5	34.5
14	MT 1716	MT SIDNEY	91.9	64.0	11.5	31.8
1	AGRIPR 10	BRENNAN	91.0	<u>64.3</u>	11.6	29.5
4	BZ 92413R	WB GUNNISON	89.3	62.9	12.1	30.7
10	PI 676978	LANNING	87.8	62.4	11.3	30.6
MEAN			95.6	62.9	11.4	32.9
C.V.			4.3	0.5	2.4	5.1
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.001
LSD(0.05)			7.2	0.6	0.5	2.6

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : FROMBERG (IRRI) : 9997

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	LODGING (0-9)
22	MT 2049	LANNING/MT 1415	<u>103.6</u>	60.6	14.5	37.5	1.3
15	MT 1809	VIDA/M0 09/3-4	101.2	59.9	14.7	37.1	1.2
9	PI 660981	DUCLAIR	100.2	59.9	14.8	37.8	<u>0.2</u>
20	MT 2030	LANNING/MT 1338	99.4	60.9	15.2	38.5	2.1
12	PI 690450	DAGMAR	99.2	60.0	15.4	38.5	1.7
18	MT 2013	MT 1542/ND819	98.3	59.8	15.6	40.9	1.1
19	MT 2022	MT 1401/ND 819	97.9	60.6	15.0	36.5	2.0
10	PI 676978	LANNING	97.6	60.2	15.4	36.1	2.2
16	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	97.5	60.6	15.1	37.9	0.7
23	MT 2050	MT 1542/MT 1415	96.4	60.8	14.6	40.2	0.8
8	PI 642366	VIDA	96.2	59.4	14.8	39.1	1.3
17	MT 2007	LANNING/ND819	95.7	60.6	14.7	39.8	1.0
25	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	95.3	58.2	14.8	37.1	3.2
2	AGRIPR 14	SY SOREN	94.6	60.6	15.2	37.5	1.4
13	WB9879CLP	WB9879CLP	93.6	59.8	14.8	38.2	1.1
14	MT 1716	MT SIDNEY	93.2	60.5	14.5	36.7	1.0
21	MT 2038	LANNING/MT1133//MT0744/MT0614	92.5	59.0	<u>15.9</u>	39.1	3.8
24	MT 2054	LANNING/MT 1528	92.3	60.4	15.2	39.2	1.9
1	AGRIPR 10	BRENNAN	91.9	<u>61.9</u>	14.9	37.5	3.1
7	PI 633974	CHOTEAU	90.6	58.7	15.0	39.8	0.7
6	ND 695	REEDER	87.6	60.5	15.4	<u>43.0</u>	0.9
3	AGRIPR141	SY INGMAR	83.0	59.7	15.6	38.3	3.1
5	BZ 996434	CORBIN	82.6	58.8	15.7	39.1	2.4
4	BZ 92413R	WB GUNNISON	80.0	59.3	14.9	38.8	2.8
11	PI 679964	NS PRESSER CLP	79.8	57.3	15.2	38.8	3.7
MEAN			93.6	59.9	15.1	38.5	1.8
C.V.			5.5	1.1	2.4	5.1	53.7
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)			9.2	1.1	0.6	3.3	1.7

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : ROOSEVELT (DRY)

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAWFLY DAMAGE (%)
14	MT 2054	LANNING/MT 1528	<u>26.4</u>	60.8	14.1	22.3	<u>13.3</u>
13	MT 2050	MT 1542/MT 1415	26.2	61.0	14.2	20.6	20.0
10	MT 2030	LANNING/MT 1338	25.2	60.8	14.6	20.4	60.0
6	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	24.3	61.3	14.6	19.5	16.7
15	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	24.3	61.8	14.5	20.8	30.0
9	MT 2022	MT 1401/ND 819	23.9	61.7	14.4	21.5	20.0
1	AGRIPR 10	BRENNAN	23.9	<u>63.3</u>	14.6	20.7	50.0
12	MT 2049	LANNING/MT 1415	23.9	59.7	13.9	20.1	60.0
21	PI 690450	DAGMAR	23.8	61.7	15.4	22.4	40.0
11	MT 2038	LANNING/MT1133//MT0744/MT0614	23.2	61.9	14.2	<u>23.0</u>	40.0
4	MT 1716	MT SIDNEY	23.1	60.8	14.3	22.0	43.3
7	MT 2007	LANNING/ND819	22.6	60.7	14.8	21.9	63.3
18	PI 660981	DUCLAIR	22.5	59.6	15.2	20.2	26.7
8	MT 2013	MT 1542/ND819	22.4	62.9	14.8	22.6	36.7
22	WB9879CLP	WB9879CLP	21.5	60.9	15.3	19.7	<u>13.3</u>
19	PI 676978	LANNING	21.3	60.5	15.2	21.3	53.3
2	AGRIPR 14	SY SOREN	20.1	61.2	15.1	20.9	53.3
5	MT 1809	VIDA/M0 09/3-4	19.1	58.9	<u>15.7</u>	19.6	46.7
3	AGRIPR141	SY INGMAR	18.9	61.4	14.8	21.1	63.3
17	PI 642366	VIDA	18.3	59.3	14.5	21.0	36.7
16	ND 695	REEDER	16.5	61.4	14.9	20.2	43.3
20	PI 679964	NS PRESSER CLP	16.4	58.6	14.9	21.0	60.0
MEAN			22.2	60.9	14.7	21.0	40.5
C.V.			10.0	0.6	2.6	6.7	23.6
PROBABILITY (ENTRY)			<0.001	<0.001	<0.001	ns	<0.001
LSD(0.05)			3.7	0.6	0.6	-	15.8

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : SHERIDAN (DRY)

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)
20	PI 679964	NS PRESSER CLP	<u>68.5</u>	62.0	11.2	32.4
17	PI 642366	VIDA	68.0	63.0	11.4	31.9
21	PI 690450	DAGMAR	67.3	62.9	11.9	32.0
15	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	67.0	62.9	10.4	31.5
8	MT 2013	MT 1542/ND819	65.5	63.3	11.6	31.8
7	MT 2007	LANNING/ND819	65.1	62.9	11.9	28.9
4	MT 1716	MT SIDNEY	65.0	62.5	11.7	<u>34.4</u>
10	MT 2030	LANNING/MT 1338	64.9	63.4	11.9	31.8
6	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	64.1	62.5	11.3	29.0
5	MT 1809	VIDA/M0 09/3-4	63.6	62.4	11.5	29.3
12	MT 2049	LANNING/MT 1415	63.2	61.4	11.9	30.3
11	MT 2038	LANNING/MT1133//MT0744/MT0614	62.9	62.8	11.6	33.9
9	MT 2022	MT 1401/ND 819	62.5	63.5	11.5	30.0
16	ND 695	REEDER	62.2	63.6	12.2	32.9
22	WB9879CLP	WB9879CLP	59.8	63.0	11.9	31.0
19	PI 676978	LANNING	59.5	62.4	12.5	30.6
2	AGRIPR 14	SY SOREN	59.2	64.0	13.3	28.6
18	PI 660981	DUCLAIR	58.8	62.6	11.5	30.9
13	MT 2050	MT 1542/MT 1415	58.1	62.3	11.6	31.8
14	MT 2054	LANNING/MT 1528	58.0	62.2	11.5	31.4
3	AGRIPR141	SY INGMAR	57.4	<u>64.7</u>	12.8	29.8
1	AGRIPR 10	BRENNAN	52.6	63.7	<u>13.4</u>	26.1
MEAN			62.4	62.9	11.8	30.9
C.V.			6.1	0.5	6.1	5.4
PROBABILITY (ENTRY)			<0.001	<0.001	<0.01	<0.001
LSD(0.05)			6.3	0.5	1.2	2.8

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bold : equal value to highest or earliest value within a column based LSD(0.05)

2022 OFF-STATION : VALLEY (DRY)

ENTRY	ID	VARIETY / PEDIGREE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	PLANT HEIGHT (IN.)	SAWFLY DAMAGE (%)
6	MT 1939	LANNING///MT1018//CHOTEAU/YELLOWSTONE	<u>29.1</u>	60.8	17.5	22.3	16.7
1	AGRIPR 10	BRENNAN	28.9	62.4	17.4	22.7	23.3
7	MT 2007	LANNING/ND819	28.9	60.6	17.4	20.1	20.0
12	MT 2049	LANNING/MT 1415	28.1	60.1	17.3	21.0	30.0
9	MT 2022	MT 1401/ND 819	27.9	61.3	18.3	22.7	16.7
4	MT 1716	MT SIDNEY	26.1	60.9	17.7	23.1	20.0
19	PI 676978	LANNING	25.6	59.6	18.6	20.6	23.3
15	MT 2063	MT 1572/MT1133//CHOTEAU/YELLOWSTONE	25.4	<u>62.6</u>	17.9	22.9	33.3
14	MT 2054	LANNING/MT 1528	25.4	61.1	17.4	20.2	20.0
13	MT 2050	MT 1542/MT 1415	25.1	61.1	17.5	21.4	33.3
2	AGRIPR 14	SY SOREN	25.0	60.6	18.3	21.8	16.7
11	MT 2038	LANNING/MT1133//MT0744/MT0614	24.9	60.7	18.0	<u>24.3</u>	20.0
21	PI 690450	DAGMAR	24.3	61.5	18.4	23.5	16.7
5	MT 1809	VIDA/M0 09/3-4	24.3	60.0	18.2	22.2	43.3
8	MT 2013	MT 1542/ND819	23.9	61.7	18.0	23.5	30.0
17	PI 642366	VIDA	23.9	60.6	17.2	20.7	33.3
10	MT 2030	LANNING/MT 1338	23.6	59.9	18.5	22.3	26.7
22	WB9879CLP	WB9879CLP	23.5	61.1	18.6	20.9	13.3
3	AGRIPR141	SY INGMAR	22.9	61.1	18.7	20.0	<u>10.0</u>
20	PI 679964	NS PRESSER CLP	21.5	60.2	17.0	19.8	43.3
18	PI 660981	DUCLAIR	21.4	59.4	<u>18.9</u>	21.6	33.3
16	ND 695	REEDER	17.0	61.4	18.5	20.9	46.7
MEAN			24.8	60.9	18.0	21.8	25.9
C.V.			12.0	0.9	3.4	7.8	44.4
PROBABILITY (ENTRY)			<0.01	<0.001	<0.01	ns	<0.01
LSD(0.05)			4.9	0.9	1.0	-	18.9

bold : highest or earliest value within a column

bold : equal value to highest or earliest value within a column based LSD(0.05)

PLANT VARIETY PROTECTION (PVP)

The developer of a new distinct variety may obtain protection (essentially a patent) for that variety if he/she chooses to do so, provided the variety meets the requirements of the Plant Variety Protection Act of 1970. This Act permits the owner or developer of a variety to prohibit others from selling, sexually multiplying, using for propagation for seed, or using to produce a hybrid, seed of his/her variety.

Two options, for plant variety protection, are available to the developer of the variety. Under the first option, the developer of the variety or his/her agent may sell either certified or uncertified seed of the variety. If the developer of the variety has reason to believe that anyone is infringing on his/her rights, he/she may resort to civil action. The other option ("certification option") for protecting a variety utilizes the provision of Title V of the Federal Seed Act. A variety protected in this manner may be sold by variety name only as a class of certified seed. It is the responsibility of the seller to inform the buyer if the variety is protected. Each container of seed sold should be labeled with a tag indicating the type of protection which the owner has. Under the first option, the label will state: "Unauthorized Propagation Prohibited - U.S. Protected Variety." If the owner of the variety has chosen the other option for variety protection, the label will state, "Unauthorized Propagation Prohibited - To be Sold by Variety Name Only as a Class of Certified Seed - U.S. Protected Variety."

PLEASE NOTE: Varieties protected under the PVP act, as amended in 1994, can no longer can be sold without permission of the variety owner (the farmer exemption has been excluded)

A complete listing of all protected varieties is available in the "Official Journal of the Plant Variety Protection Office" which may be obtained upon request from:

Plant Variety Protection Office Warehouse Division, AMS U.S. Dept. of Agriculture National Agricultural Library Beltsville, MD 20705

Phone: (301) 504-5518

Internet: <http://www.ams.usda.gov/science/pvpo/pvpindex.htm>

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