

2020 Montana Spring Wheat Variety Performance Evaluations

MONTANA COUNTIES



50 0 50 100 Miles

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 2017-2020 is provided for each of the testing sites. Data for varieties grown in previous years can be found on this website:

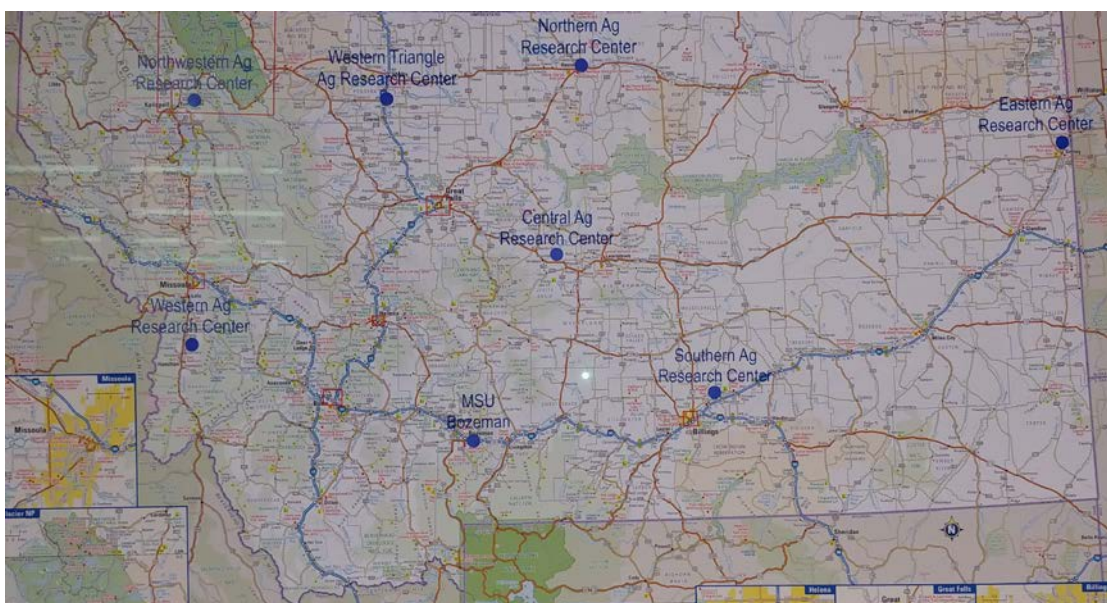
<http://plantsciences.montana.edu/crops/index.html>.

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 8 Montana sites; including Bozeman (dryland), Kalispell (NWARC : dryland), Havre (NARC : dryland), Sidney (EARC : dryland and irrigated), Huntley (SARC : dryland), Moccasin (CARC : dryland) and Conrad (WTARC : dryland).



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.

**2017-2020 OVERALL AVERAGE OF GRAIN YIELD, TEST WEIGHT AND PROTEIN CONTENT
FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA**

VARIETY / LINE	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020
ALUM	66.2	63.8	64.4	62.2	62.4	61.8	61.7	61.2	14.2	14.3	14.4	14.4
CHOTEAU	65.7	63.0	62.6	59.8	61.5	60.7	60.7	60.3	15.1	15.1	15.1	15.1
CORBIN	63.2	61.4	61.1	59.3	62.4	61.9	61.7	61.3	14.6	14.7	14.7	14.7
DAGMAR	71.2	68.5	68.3	66.4	62.3	61.7	61.6	61.3	15.3	15.1	15.1	15.0
DUCLAIR	67.7	66.8	66.8	63.6	61.3	60.9	60.9	60.2	14.4	14.7	14.5	14.5
EGAN	63.7	61.6	61.1	59.2	60.4	60.1	60.0	59.4	16.1	16.2	16.2	16.1
FORTUNA	56.2	55.7	54.8	54.1	61.3	60.7	60.6	60.4	14.5	14.6	14.5	14.5
LANNING	67.3	64.6	65.3	62.8	61.7	61.3	61.1	60.5	15.4	15.4	15.3	15.2
LCS REBEL	66.8	64.5	65.0	62.8	62.9	62.6	62.4	62.0	15.1	15.2	15.1	15.0
MCNEAL	64.8	63.5	63.1	60.5	60.9	60.7	60.5	59.8	14.9	14.7	14.7	14.7
NS PRESSER CLP	-	70.0	69.3	66.4	-	59.9	59.7	59.3	-	14.7	14.5	14.5
REEDER	65.8	62.8	63.9	62.1	62.2	61.7	61.4	60.9	14.8	14.9	14.8	14.9
SY INGMAR	65.6	63.7	62.4	60.0	62.2	61.6	61.6	61.1	15.3	15.4	15.5	15.3
SY Rockford	69.3	66.6	66.2	63.8	61.1	60.2	60.2	59.9	14.5	14.5	14.4	14.4
VIDA	71.9	69.0	68.4	66.0	61.1	60.8	60.6	60.2	14.5	14.4	14.2	14.2
WB 9590	64.1	63.0	63.5	61.1	62.5	61.7	61.6	61.3	14.9	15.1	15.0	15.0
WB 9719	69.6	68.0	67.7	65.6	64.1	64.0	63.7	63.1	14.3	14.3	14.3	14.3
WB 9879 CLP	66.4	64.8	64.0	61.8	61.8	61.0	61.0	60.7	15.2	15.1	15.1	15.0
WB GUNNISON	64.0	62.1	62.3	59.5	62.5	62.1	61.9	61.4	13.9	14.0	13.9	13.9
MT 1716	69.1	65.7	67.0		62.8	61.9	61.9		14.6	14.8	14.6	
SY 611 CL2	64.6	63.0	62.8		61.9	62.1	61.8		15.0	15.0	14.9	
SY LONGMIRE	67.8	66.5	66.1		62.7	62.4	62.1		14.7	14.8	14.8	
SY McCLOUD	63.4	61.0	60.6		62.7	62.3	62.2		15.3	15.6	15.6	
MT 1855	70.0	69.4			61.5	61.4			14.9	14.7		
MT 1866	68.4	68.1			61.8	61.4			14.7	14.6		
AP MURDOCK	61.8				61.8				14.8			
LCS BUSTER	74.2				59.4				13.0			
LCS CANNON	65.0				63.8				14.5			
MS Barracuda	61.0				62.0				15.5			
MS Chevelle	68.0				62.1				13.8			
MS Rancho	67.9				61.6				14.1			
NP 11100135-1 CL2	65.3				60.8				15.4			
NP 12100559-16	65.4				62.1				15.1			
WB 9707	59.8				62.0				15.4			

1) Kalispell's 2018 and 2020 data was excluded, 2) Huntley's 2019 data was excluded due to hail damage

3) Conrad's 2020 data was excluded

**2017-2020 OVERALL AVERAGE OF HEADING DATE, PLANT HEIGHT AND STEM SOLIDNESS
FOR THE ADVANCED SPRING WHEAT NURSERY GROWN ACROSS MONTANA**

VARIETY / LINE	HEADING DATE				PLANT HEIGHT				STEM SOLIDNESS (5-25)			
	(JULIAN)				(INCHES)				BOZEMAN ONLY			
	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020
ALUM	174.6	176.9	176.5	175.0	30.6	31.0	30.9	30.2	8.6	9.9	9.4	9.1
CHOTEAU	174.3	176.8	176.3	174.7	29.5	30.0	29.8	29.2	24.0	23.0	22.5	22.6
CORBIN	172.1	174.6	173.9	172.4	30.0	30.5	30.5	29.9	14.8	14.3	13.1	12.1
DAGMAR	171.7	174.3	173.6	172.3	31.3	31.3	31.3	30.5	22.2	18.6	18.1	16.8
DUCLAIR	171.8	174.2	173.6	172.2	30.4	30.9	30.6	30.0	21.8	20.2	20.0	19.8
EGAN	175.5	177.6	177.2	175.6	30.8	31.2	31.2	30.4	8.5	8.6	8.3	7.7
FORTUNA	175.5	177.3	176.4	174.9	36.6	37.0	36.6	36.0	13.8	14.7	15.0	14.9
LANNING	171.7	174.5	174.5	173.1	28.8	29.5	29.8	29.1	8.7	8.7	7.7	7.2
LCS REBEL	172.3	174.5	174.0	172.8	32.9	33.2	33.1	32.3	9.8	9.8	9.3	8.8
MCNEAL	176.3	178.3	177.9	176.4	32.1	32.3	32.2	31.5	8.1	8.7	8.3	7.8
NS PRESSER CLP	-	179.5	179.4	177.6	-	32.9	32.9	32.0	-	9.2	8.4	8.0
REEDER	174.2	177.2	176.7	175.2	31.4	32.0	31.9	31.3	8.2	8.5	7.9	7.3
SY INGMAR	174.6	176.7	175.8	174.2	29.3	29.9	29.6	29.0	10.6	10.3	10.0	9.5
SY Rockford	176.1	178.8	177.9	176.3	30.1	30.5	30.5	29.8	9.2	10.2	9.2	8.5
VIDA	175.2	177.4	176.8	175.4	30.8	30.6	30.5	29.8	14.5	13.6	12.5	11.8
WB 9590	173.0	174.9	174.2	172.6	26.7	26.8	27.6	26.6	9.8	9.7	9.6	8.7
WB 9719	176.4	178.6	177.9	176.2	28.7	29.2	29.4	28.5	7.5	8.5	7.9	7.3
WB 9879 CLP	175.3	177.4	176.9	175.2	29.9	30.4	30.4	29.6	24.7	23.9	22.9	23.2
WB GUNNISON	174.0	176.2	175.6	174.1	29.4	29.8	29.8	28.9	13.6	13.6	12.7	11.9
MT 1716	172.3	174.3	173.8		30.3	30.5	30.2		10.0	10.1	9.3	
SY 611 CL2	173.4	175.7	175.0		27.7	28.0	28.6		10.9	10.5	9.5	
SY LONGMIRE	174.2	176.3	175.6		30.0	30.1	29.7		19.5	19.6	19.0	
SY McCLOUD	172.3	174.6	173.9		29.8	30.2	29.9		10.2	10.5	9.7	
MT 1855	177.1	179.1			33.1	33.7			17.8	17.3		
MT 1866	174.7	177.1			31.3	31.7			12.1	11.5		
AP MURDOCK	173.1				28.4				9.9			
LCS BUSTER	180.0				30.8				17.2			
LCS CANNON	170.5				28.5				9.2			
MS Barracuda	170.8				28.1				10.1			
MS Chevelle	172.4				28.8				6.9			
MS Rancho	171.4				30.3				9.9			
NP 11100135-1 CL2	173.0				28.9				10.1			
NP 12100559-16	175.3				27.4				10.9			
WB 9707	171.1				28.2				9.8			

1) Kalispell's 2018 and 2020 data was excluded, 2) Huntley's 2019 data was excluded due to hail damage

3) Conrad's 2020 data was excluded

2017-2020 ADVANCED SPRING WHEAT NURSERY, KALISPELL (DRY) : YIELD, TEST WEIGHT AND PROTEIN

VARIETY / LINE	YIELD (BU/AC)		TEST WEIGHT (LB/BU)		PROTEIN (%)	
	2019	2017 ¹⁾ , 2019	2019	2017 ¹⁾ , 2019	2019	2017 ¹⁾ , 2019
ALUM	50.1	51.1	62.1	60.5	14.7	14.8
CHOTEAU	38.8	44.9	59.8	59.1	15.2	15.1
CORBIN	43.5	49.8	61.1	60.4	14.3	14.6
DAGMAR	50.1	<u>56.0</u>	60.8	59.9	14.9	14.9
DUCLAIR	52.2	<u>54.1</u>	60.3	59.1	14.7	14.3
EGAN	42.9	47.8	59.9	57.9	<u>17.0</u>	<u>16.7</u>
FORTUNA	38.3	45.4	60.0	59.8	15.0	14.8
LANNING	46.1	50.8	60.9	58.6	15.5	15.5
LCS REBEL	<u>56.4</u>	<u>58.4</u>	62.7	<u>61.4</u>	15.0	14.9
MCNEAL	49.9	52.7	60.5	58.8	14.8	14.9
MT 1673	46.9	50.2	59.2	58.2	16.0	15.6
NS PRESSER CLP	<u>59.6</u>	<u>60.5</u>	60.7	59.0	13.6	14.2
REEDER	46.7	50.4	61.5	59.7	14.6	15.1
SY INGMAR	45.8	50.8	62.0	<u>61.1</u>	16.5	<u>15.9</u>
SY Rockford	44.1	51.2	59.0	58.8	15.3	15.1
SY Valda	<u>54.0</u>	51.8	60.5	59.5	14.1	14.2
THATCHER	43.9	46.4	60.1	58.7	14.6	15.0
VIDA	49.0	<u>55.0</u>	60.5	59.3	14.2	14.3
WB 9590	44.4	51.2	60.3	59.4	15.6	15.4
WB 9719	38.8	47.3	<u>63.6</u>	<u>62.3</u>	15.3	15.0
WB 9879 CLP	42.9	48.1	59.8	59.4	15.4	15.3
WB GUNNISON	45.2	49.7	61.6	60.3	14.2	14.0
LNR 1156	48.4		60.4		14.3	
LNR 1751	<u>58.3</u>		61.4		14.6	
MT 1716	47.0		60.0		15.1	
MT 1855	<u>57.2</u>		61.9		14.8	
MT 1866	50.1		61.0		14.8	
SY 611 CL2	48.9		63.1		15.2	
SY Longmire	45.5		62.0		15.3	
SY McCloud	45.3		61.9		15.8	
WB 9668	39.3		60.3		<u>16.7</u>	

1) not planted in 2018, 2020

2017-2020 ADVANCED SPRING WHEAT NURSERY, BOZEMAN (DRY) : YIELD, TEST WEIGHT AND PROTEIN

VARIETY / LINE	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020
ALUM	91.8	90.7	96.3	86.9	62.2	62.3	62.4	61.9	13.6	14.0	14.2	14.6
CHOTEAU	85.2	83.9	89.2	81.0	61.7	60.2	60.8	60.2	14.4	14.9	14.9	15.1
CORBIN	89.7	86.4	89.8	81.7	61.8	60.9	61.4	61.2	14.4	14.8	14.8	14.9
DAGMAR	99.2	94.2	97.6	89.6	61.7	60.9	61.4	61.1	14.9	15.1	15.2	15.3
DUCLAIR	89.9	92.0	98.5	88.1	60.7	60.1	60.6	60.0	13.9	15.4	15.0	15.1
EGAN	84.2	82.9	85.4	77.4	60.0	59.8	60.3	59.8	16.1	16.6	16.9	16.9
FORTUNA	84.0	81.3	78.8	72.9	62.3	61.0	61.4	61.2	14.0	14.4	14.5	14.7
LANNING	94.6	92.0	94.0	85.5	61.5	60.9	61.5	61.0	14.9	15.5	15.5	15.6
LCS REBEL	94.3	94.3	97.4	89.4	62.0	61.7	62.0	61.9	14.1	14.5	14.5	14.7
MCNEAL	82.5	78.7	80.3	75.5	60.7	60.2	60.4	59.7	14.8	15.3	15.6	15.6
NS PRESSER CLP	-	94.2	97.7	89.8	-	58.3	58.9	58.7	-	14.8	14.8	15.0
REEDER	86.8	87.0	92.8	84.8	61.6	61.3	61.4	61.0	15.1	15.2	15.1	15.3
SY INGMAR	92.9	91.3	92.6	84.9	62.3	61.6	61.9	61.2	15.0	15.2	15.2	15.3
SY Rockford	104.5	99.8	101.2	92.4	60.4	59.5	60.1	59.8	14.4	14.3	14.2	14.4
VIDA	100.9	96.4	103.4	94.3	59.1	59.4	59.9	59.9	14.7	14.7	14.5	14.6
WB 9590	94.6	93.7	98.4	88.3	61.7	60.8	61.3	61.1	15.0	15.2	15.1	15.3
WB 9719	95.3	94.8	101.8	91.8	64.1	64.2	64.4	64.0	14.0	14.2	14.1	14.3
WB 9879 CLP	86.4	88.0	91.1	83.0	61.0	59.9	60.5	60.3	15.2	15.3	15.1	15.2
WB GUNNISON	83.1	80.3	89.6	80.6	62.4	62.0	62.1	61.7	13.4	13.9	13.8	14.1
MT 1716	89.2	89.6	95.9		61.8	60.9	61.4		14.3	14.6	14.7	
SY 611 CL2	86.1	82.8	87.8		61.6	61.6	61.9		14.8	15.0	15.0	
SY LONGMIRE	80.7	84.0	91.6		62.0	61.9	62.1		14.3	14.8	14.7	
SY McCLOUD	91.4	88.5	89.7		63.1	62.1	62.6		14.9	15.5	15.5	
MT 1855	114.4	105.7			60.5	60.6			14.5	14.6		
MT 1866	91.0	92.6			61.2	60.9			14.8	14.6		
AP MURDOCK	82.8				60.8	60.8			14.4			
LCS BUSTER	104.7				58.0	58.0			12.9			
LCS CANNON	90.2				62.9	62.9			13.8			
MS Barracuda	78.0				61.0	61.0			14.4			
MS Chevelle	106.0				61.9	61.9			13.1			
MS Ranchero	103.2				61.2	61.2			13.7			
NP 11100135-1 CL2	89.5				61.0	61.0			15.2			
NP 12100559-16	94.4				61.0	61.0			15.0			
WB 9707	90.8				62.9	62.9			15.0			

2017-2020 ADVANCED SPRING WHEAT NURSERY, HUNTLEY (DRY) : YIELD, TEST WEIGHT AND PROTEIN

VARIETY / LINE	YIELD			TEST WEIGHT			PROTEIN		
	(BU/AC)			(LB/BU)			(%)		
	2020	2018 ¹⁾ , 2020	2017, 2018, 2020	2020	2018 ¹⁾ , 2020	2017, 2018, 2020	2020	2018 ¹⁾ , 2020	2017, 2018, 2020
ALUM	85.6	77.7	78.1	62.8	62.1	61.1	14.4	14.6	14.7
CHOTEAU	91.0	84.8	79.5	61.6	62.0	61.1	15.3	15.4	15.2
CORBIN	84.9	76.8	77.5	62.7	62.5	62.0	15.0	15.2	14.8
DAGMAR	93.1	83.1	85.2	62.1	61.8	61.7	16.0	15.8	15.4
DUCLAIR	92.4	86.2	83.2	61.8	62.0	60.9	15.2	14.9	14.8
EGAN	89.4	80.5	80.6	61.1	60.7	60.2	17.2	17.3	17.1
FORTUNA	75.7	71.9	72.9	61.7	62.0	62.0	15.7	15.3	15.1
LANNING	80.9	77.5	79.0	61.8	61.6	61.4	16.8	16.3	15.8
LCS REBEL	83.1	78.3	79.0	62.5	62.7	62.5	15.7	15.6	15.2
MCNEAL	93.2	84.8	78.4	61.5	61.0	59.9	16.0	15.9	15.6
NS PRESSER CLP	-	94.6	86.6	-	58.2	57.8	-	15.3	15.1
REEDER	82.3	75.3	76.8	62.4	61.2	61.0	15.5	15.6	15.5
SY INGMAR	87.9	78.0	78.1	63.0	62.6	62.0	15.4	15.5	15.3
SY Rockford	97.0	90.0	86.0	61.3	61.7	60.9	15.0	14.9	14.8
VIDA	98.2	86.6	85.8	61.8	61.7	61.2	14.8	14.6	14.5
WB 9590	77.9	73.0	73.5	62.0	61.9	61.3	15.2	15.3	15.1
WB 9719	95.0	77.6	80.3	64.9	64.1	63.4	14.6	14.5	14.5
WB 9879 CLP	88.7	80.3	78.2	61.7	61.9	61.2	15.4	15.5	15.3
WB GUNNISON	83.6	73.7	72.6	63.0	62.5	61.2	14.1	14.3	14.0
LCS CANNON	81.6	80.8		63.6	64.0		15.7	15.5	
MT 1716	99.5	92.0		62.5	63.2		15.1	14.9	
SY 611 CL2	87.6	75.8		63.3	62.9		15.5	15.4	
SY LONGMIRE	91.3	84.4		62.9	62.6		15.1	15.2	
SY McCLOUD	80.6	75.4		63.3	63.7		15.6	15.7	
AP MURDOCK	78.3			61.8			15.5		
LCS BUSTER	92.6			60.1			13.3		
MS Barracuda	79.2			61.7			16.4		
MS Chevelle	90.9			61.9			14.4		
MS Ranchero	83.6			61.7			14.8		
MT 1855	92.9			61.8			15.1		
MT 1866	94.6			62.3			15.0		
NP 11100135-1 CL2	89.3			62.2			16.1		
NP 12100559-16	88.9			62.3			14.9		
WB 9707	73.7			61.7			16.4		

1) no harvest due to hail in 2019

2017-2020 ADVANCED SPRING WHEAT NURSERY, MOCCASIN (DRY) : YIELD, TEST WEIGHT AND PROTEIN

VARIETY / PEDIGREE	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020
ALUM	47.7	44.9	49.5	45.5	62.7	60.4	61.1	60.4	12.8	13.1	12.2	12.8
CHOTEAU	45.0	47.7	49.1	45.1	62.6	61.5	61.5	60.7	13.3	13.2	12.6	13.2
CORBIN	44.7	49.0	50.1	45.3	63.0	61.6	60.9	60.2	13.0	13.2	12.5	13.1
DAGMAR	53.5	50.0	53.3	49.5	63.5	62.3	62.4	61.5	13.3	13.0	12.2	12.7
DUCLAIR	47.1	47.4	48.5	44.9	62.3	61.2	61.2	60.1	12.9	12.8	12.1	12.7
EGAN	41.3	44.2	46.9	42.7	61.6	60.2	60.6	59.5	14.1	14.3	13.4	14.1
FORTUNA	36.8	40.0	41.5	38.7	61.6	60.4	60.6	59.8	13.8	13.7	12.8	13.3
LANNING	48.7	53.9	54.7	49.9	62.8	62.0	62.0	60.6	13.4	13.0	12.2	12.7
LCS REBEL	51.4	50.4	53.4	48.3	63.8	62.5	62.7	61.6	13.2	13.0	12.0	12.7
MCNEAL	46.9	46.4	49.5	45.8	61.9	60.6	61.1	60.0	13.2	12.9	12.0	12.6
NS PRESSER CLP	-	50.6	52.7	48.4	-	59.6	59.7	58.9	-	13.1	11.9	12.4
REEDER	48.0	45.9	49.6	45.3	63.2	61.9	62.0	60.9	13.1	13.0	12.2	12.8
SY INGMAR	42.2	47.5	49.0	44.7	63.7	62.1	62.6	61.3	14.0	13.5	13.0	13.4
SY Rockford	47.7	54.6	55.5	50.9	62.6	61.2	61.3	60.6	13.3	12.9	12.0	12.6
VIDA	53.0	53.3	54.5	48.7	62.3	60.8	61.1	60.0	13.0	12.4	11.5	12.2
WB 9590	45.0	51.0	53.2	48.2	63.3	61.9	62.1	60.9	13.2	13.0	12.3	13.0
WB 9719	46.4	45.5	49.2	45.0	65.4	64.0	64.0	62.8	12.9	12.4	11.8	12.4
WB 9879 CLP	51.3	49.6	51.4	46.6	63.3	62.2	62.5	61.5	13.7	13.3	12.6	13.2
WB GUNNISON	50.3	51.8	55.1	49.6	62.8	61.3	61.6	60.6	13.4	13.3	12.3	12.8
MT 1716	47.1	45.1	49.4		64.0	62.3	62.5		13.0	12.7	11.9	
SY 611 CL2	46.4	47.1	51.4		63.8	63.2	63.3		13.4	13.0	12.5	
SY LONGMIRE	45.2	46.9	48.9		63.6	62.6	62.7		13.8	13.2	12.5	
SY McCLOUD	46.8	46.8	49.9		63.8	63.1	63.2		14.1	13.7	13.2	
MT 1855	46.4	49.8			62.1	60.5			13.8	13.4		
MT 1866	50.2	50.0			62.9	61.1			12.9	12.8		
AP MURDOCK	44.2				62.8				13.7			
LCS BUSTER	45.8				59.3				12.8			
LCS CANNON	46.5				64.1				12.6			
MS Barracuda	48.0				63.0				13.7			
MS Chevelle	46.6				62.9				12.2			
MS Ranchero	48.1				62.3				12.7			
NP 11100135-1 CL2	44.0				62.5				13.2			
NP 12100559-16	41.5				63.1				14.3			
WB 9707	48.2				63.2				12.7			

2017-2020 ADVANCED SPRING WHEAT NURSERY, CONRAD (DRY) : YIELD, TEST WEIGHT AND PROTEIN

VARIETY / LINE	YIELD			TEST WEIGHT			PROTEIN		
	(BU/AC)			(LB/BU)			(%)		
	2019 ¹⁾	2018-2019	2017-2019	2019 ¹⁾	2018-2019	2017-2019	2019 ¹⁾	2018-2019	2017-2019
ALUM	46.7	52.1	57.1	60.4	59.1	58.9	14.7	14.9	14.6
CHOTEAU	53.0	60.0	60.0	60.7	59.4	59.0	14.7	14.9	15.1
CORBIN	51.6	60.5	59.7	62.9	61.1	60.1	14.2	14.3	14.6
DAGMAR	66.7	76.3	74.0	62.7	61.0	60.4	14.8	15.0	15.0
DUCLAIR	54.2	63.6	62.7	60.9	59.5	58.6	15.6	15.1	15.1
EGAN	46.3	54.6	54.9	60.1	58.3	57.9	15.6	15.9	15.8
FORTUNA	54.0	57.1	56.3	62.1	60.5	59.8	13.9	14.3	14.4
LANNING	49.3	62.8	61.4	61.5	59.9	59.0	15.5	15.4	15.4
LCS REBEL	46.5	58.3	60.6	63.9	61.1	60.5	15.5	15.4	15.3
MCNEAL	50.9	55.6	56.0	61.2	59.1	58.2	13.9	14.4	14.4
NS PRESSER CLP	57.1	66.9	66.4	61.5	58.8	58.2	14.0	14.5	14.4
REEDER	46.2	57.7	61.1	61.9	59.9	59.4	15.5	15.5	15.4
SY INGMAR	53.7	59.5	57.6	61.4	59.8	59.6	15.2	15.4	15.5
SY Rockford	45.3	55.4	55.1	59.7	58.1	57.7	14.9	14.8	14.7
SY Valda	50.1	63.1	61.2	62.0	60.0	59.5	15.0	14.8	14.8
THATCHER	35.3	45.9	46.8	57.7	57.0	56.4	15.0	15.0	15.1
VIDA	58.1	64.6	62.3	61.9	59.4	58.8	14.1	14.3	14.2
WB 9590	50.6	58.6	57.3	62.4	60.5	60.2	15.7	15.6	15.7
WB 9719	64.2	70.8	68.3	65.2	62.7	61.9	13.9	14.3	14.3
WB 9879 CLP	59.4	62.6	63.3	61.3	59.3	59.3	15.2	15.5	15.3
WB GUNNISON	58.1	65.1	64.1	62.7	61.2	60.5	13.3	13.5	13.7
MT 1716	47.5	61.7		62.3	60.4		15.8	15.3	
SY 611 CL2	51.0	60.2		63.4	61.3		15.1	15.1	
SY Longmire	59.7	62.8		62.1	59.5		14.7	14.8	
SY McCloud	51.8	59.8		63.3	61.4		16.0	15.7	
LNR 1156	47.9			62.0			14.9		
LNR 1751	53.9			62.9			15.3		
MT 1855	57.2			62.2			14.6		
MT 1866	63.5			62.0			14.2		
WB 9668	55.1			62.2			15.5		

1) Not planted in 2020

2017-2020 ADVANCED SPRING WHEAT NURSERY, HAVRE (DRY) : YIELD, TEST WEIGHT AND PROTEIN

VARIETY / LINE	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020
ALUM	57.5	53.8	49.2	44.5	59.8	59.7	59.8	59.5	14.1	14.8	15.1	15.3
CHOTEAU	64.4	54.5	48.5	43.0	60.8	59.8	59.7	59.3	14.1	15.4	15.6	15.8
CORBIN	56.0	50.8	47.5	41.7	60.6	60.3	60.5	60.1	14.6	15.6	15.9	16.0
DAGMAR	70.0	60.1	54.7	48.4	61.4	60.4	60.6	60.3	14.5	15.4	15.6	15.8
DUCLAIR	63.7	56.5	49.3	43.6	59.5	59.1	59.3	58.8	14.3	15.2	15.4	15.7
EGAN	62.7	53.4	48.6	43.8	58.6	57.9	57.7	57.3	15.2	16.2	16.6	16.7
FORTUNA	49.2	45.2	41.9	38.3	60.5	59.3	59.3	58.9	14.2	15.0	15.2	15.3
LANNING	63.7	54.1	50.7	45.0	60.1	60.0	59.5	59.2	14.4	15.6	15.8	16.1
LCS REBEL	61.0	52.5	47.8	42.0	61.4	60.6	60.8	60.7	14.4	15.5	15.7	16.0
MCNEAL	57.3	52.2	48.0	44.2	58.6	58.6	58.2	57.9	13.9	14.7	15.1	15.3
NS PRESSER CLP	-	51.6	49.3	45.8	-	58.8	58.7	58.7	-	14.9	15.0	15.1
REEDER	61.8	52.1	49.2	44.4	61.1	60.4	60.2	59.8	13.8	14.9	15.2	15.4
SY INGMAR	57.8	51.2	47.9	43.5	61.2	60.9	61.2	60.8	14.4	15.4	15.6	15.8
SY Rockford	62.1	53.7	50.5	45.7	59.9	58.9	59.2	58.8	13.9	14.9	15.1	15.3
VIDA	64.5	58.3	53.6	49.3	60.0	59.7	59.6	59.4	13.7	14.6	14.7	14.9
WB 9590	59.0	52.5	47.8	41.7	62.2	61.3	61.3	61.2	14.1	15.3	15.7	15.8
WB 9719	61.3	55.5	52.7	47.6	61.9	61.8	61.9	61.5	13.6	14.6	14.8	15.0
WB 9879 CLP	63.5	57.5	53.2	47.1	60.8	59.8	59.8	59.4	14.4	15.5	15.7	15.9
WB GUNNISON	61.1	56.9	50.1	44.3	61.2	60.7	60.6	60.1	13.7	14.4	14.7	14.8
MT 1716	62.9	57.0	52.1		61.5	60.8	60.9		14.2	15.0	15.2	
SY 611 CL2	59.7	52.9	49.4		61.5	61.3	61.2		14.2	15.2	15.4	
SY LONGMIRE	64.9	57.7	52.7		60.7	60.8	60.7		13.9	15.3	15.6	
SY McCLOUD	59.6	50.5	47.0		62.8	61.7	62.0		14.5	15.8	16.1	
MT 1855	55.7	52.7			59.1	58.9			14.2	15.1		
MT 1866	65.2	57.4			60.3	60.0			13.8	14.8		
AP MURDOCK	56.6				60.4				14.5			
LCS BUSTER	60.6				55.5				13.5			
LCS CANNON	61.1				62.9				13.8			
MS Barracuda	54.8				61.9				14.6			
MS Chevelle	57.6				60.4				13.3			
MS Ranchero	56.3				60.0				13.9			
NP 11100135-1 CL2	63.7				60.2				14.9			
NP 12100559-16	62.0				61.4				14.4			
WB 9707	49.4				61.1				14.7			

2017-2020 ADVANCED SPRING WHEAT NURSERY, SIDNEY (DRY) : YIELD, TEST WEIGHT AND PROTEIN

VARIETY / LINE	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2020 ¹⁾	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020
ALUM	40.4	64.8	63.6	54.1	64.1	63.9	64.3	63.8	15.4	14.0	14.2	14.1
CHOTEAU	38.8	65.3	60.2	50.2	62.7	62.5	62.8	62.3	16.3	15.1	15.2	14.9
CORBIN	31.6	56.2	54.3	46.7	63.3	63.0	63.3	63.1	15.6	14.9	15.0	14.8
DAGMAR	42.7	62.8	61.2	54.0	63.7	63.5	63.6	63.5	16.7	15.2	15.1	14.9
DUCLAIR	37.3	62.1	58.8	49.7	61.6	62.0	62.3	61.8	15.4	14.3	14.5	14.5
EGAN	34.4	57.1	54.6	47.8	60.3	61.2	61.6	60.7	18.2	16.5	16.6	16.3
FORTUNA	32.7	51.8	48.6	43.8	62.2	62.2	62.5	62.2	15.3	14.3	14.4	14.4
LANNING	38.1	61.2	59.7	51.9	63.0	62.9	63.0	62.7	17.1	16.0	15.9	15.5
LCS REBEL	37.8	61.0	57.8	50.9	64.4	64.3	64.6	64.5	17.0	15.6	15.6	15.3
MCNEAL	39.2	63.4	63.1	53.3	61.4	62.2	62.5	61.7	16.4	14.6	14.5	14.4
NS PRESSER CLP	-	69.6	65.6	58.4	-	62.2	62.4	62.0	-	14.5	14.6	14.1
REEDER	43.8	66.0	64.6	56.4	63.6	63.5	63.6	63.3	16.5	15.3	15.1	14.9
SY INGMAR	46.0	65.4	59.1	52.3	63.8	63.5	64.0	63.6	16.1	15.5	15.6	15.3
SY Rockford	38.3	68.6	62.6	55.7	62.6	62.4	62.6	62.3	16.2	14.6	14.6	14.5
VIDA	46.2	66.3	64.5	57.6	63.1	62.8	63.1	62.9	15.5	14.4	14.4	14.0
WB 9590	36.2	60.8	60.0	52.8	64.1	63.7	64.1	64.2	17.2	15.8	15.5	15.1
WB 9719	42.2	70.0	67.2	57.4	65.4	65.9	66.0	65.4	16.0	14.5	14.8	14.5
WB 9879 CLP	35.6	60.9	57.9	50.8	62.7	62.6	63.0	62.7	16.8	14.9	14.9	14.8
WB GUNNISON	34.9	54.2	54.3	47.1	63.1	63.3	63.4	63.2	15.1	14.2	14.3	14.1
MT 1716	41.6	66.5	63.0		64.0	63.5	64.1		15.9	14.7	14.5	
SY 611 CL2	37.6	61.6	59.4		64.6	64.7	64.9		16.7	15.0	15.0	
SY LONGMIRE	40.4	61.7	60.6		64.2	64.4	64.5		16.2	15.0	15.1	
SY McCLOUD	37.0	57.7	55.1		65.0	64.6	64.9		16.5	16.0	16.0	
MT 1855	37.5	65.3			63.0	63.1			16.9	15.2		
MT 1866	40.9	66.1			63.4	63.5			16.2	14.6		
AP MURDOCK	33.6				63.2				16.2			
LCS BUSTER	46.0				61.9				13.4			
LCS CANNON	36.6				65.3				15.7			
MS Barracuda	31.6				63.5				16.7			
MS Chevelle	34.1				64.7				15.5			
MS Ranchero	37.8				63.6				15.1			
NP 11100135-1 CL2	41.4				63.5				16.6			
NP 12100559-16	34.9				63.5				16.3			
WB 9707	34.5				64.1				16.6			

1) Poor standing in 2020

2017-2020 ADVANCED SPRING WHEAT NURSERY, SIDNEY (IRRI) : YIELD, TEST WEIGHT AND PROTEIN

VARIETY / LINE	YIELD				TEST WEIGHT				PROTEIN			
	(BU/AC)				(LB/BU)				(%)			
	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020	2020	2019-2020	2018-2020	2017-2020
ALUM	89.0	86.4	89.3	91.1	63.5	63.1	63.3	63.7	14.7	15.0	15.0	14.3
CHOTEAU	87.6	85.2	84.8	86.2	62.6	61.8	61.9	62.0	15.6	15.3	15.3	14.4
CORBIN	92.1	87.2	84.6	88.4	64.0	62.9	63.0	63.2	14.9	15.3	15.4	14.9
DAGMAR	95.4	95.5	94.6	96.6	63.6	62.8	62.7	62.9	16.1	16.0	16.2	15.2
DUCLAIR	87.6	88.0	88.0	89.9	62.6	61.8	62.0	62.0	15.0	14.9	15.0	14.2
EGAN	80.3	84.3	82.7	83.7	61.6	61.3	61.4	61.7	16.1	16.0	16.0	15.3
FORTUNA	68.9	68.6	68.7	72.3	62.9	61.8	61.8	62.1	15.0	15.3	15.3	14.7
LANNING	99.0	98.3	95.8	96.1	63.1	62.1	62.2	62.4	16.1	16.0	16.0	15.1
LCS REBEL	99.0	94.9	94.5	95.3	65.1	64.2	64.3	64.5	15.4	15.6	15.8	15.1
MCNEAL	85.5	88.1	87.7	89.5	62.5	61.8	61.9	62.1	15.3	15.5	15.5	14.7
NS PRESSER CLP	-	89.0	85.9	90.7	-	61.2	61.1	61.4	-	14.9	14.8	14.1
REEDER	93.1	93.9	93.8	94.7	63.8	63.0	63.0	63.2	15.1	15.3	15.5	15.0
SY INGMAR	100.2	97.9	97.2	95.6	65.0	63.7	63.9	64.0	15.1	15.3	15.4	14.6
SY Rockford	95.7	96.8	96.6	97.9	63.0	61.8	61.9	61.9	14.3	14.6	14.7	14.0
VIDA	96.3	97.0	95.5	97.2	63.0	62.5	62.3	62.5	14.9	15.2	15.0	14.1
WB 9590	93.5	93.3	93.2	94.5	63.9	62.9	62.9	63.0	15.3	15.6	15.8	15.0
WB 9719	94.2	95.6	97.9	99.5	66.1	65.5	65.6	65.8	14.6	14.8	14.9	14.3
WB 9879 CLP	86.2	83.5	84.0	86.5	63.2	61.9	62.1	62.2	15.2	15.6	15.6	14.7
WB GUNNISON	89.2	83.3	82.2	81.9	64.0	63.1	63.1	63.4	14.1	14.4	14.6	13.8
MT 1716	98.1	94.0	96.8		64.8	63.7	63.8		14.8	15.2	15.3	
SY 611 CL2	103.9	104.6	101.9		64.8	64.1	64.2		14.9	14.9	15.1	
SY LONGMIRE	100.6	100.3	96.6		64.4	63.6	63.4		14.7	15.1	15.3	
SY McCLOUD	93.2	92.7	88.2		64.9	64.1	64.1		15.5	15.7	15.9	
MT 1855	91.1	92.1			63.1	62.6			14.9	15.0		
MT 1866	96.4	97.7			63.6	63.1			15.2	15.3		
AP MURDOCK	99.5				64.1				14.5			
LCS BUSTER	107.9				62.3				12.4			
LCS CANNON	99.7				65.8				15.2			
MS Barracuda	99.0				64.3				15.2			
MS Chevelle	103.8				64.2				14.0			
MS Ranchero	105.5				63.6				14.0			
NP 11100135-1 CL2	100.3				64.2				15.3			
NP 12100559-16	97.5				64.4				14.8			
WB 9707	85.0				63.6				16.1			

**2020 OVERALL AGRONOMIC SUMMARY FOR THE ADVANCED SPRING WHEAT
NURSERY GROWN ACROSS MONTANA**

VARIETY / LINE	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)
ALUM	70.5	62.4	14.2	174.6	30.6
AP MURDOCK	66.5	61.8	14.8	173.1	28.4
CHOTEAU	70.2	61.5	15.1	174.3	29.5
CORBIN	68.4	62.4	14.6	172.1	30.0
DAGMAR	75.9	62.3	15.3	171.6	31.4
DUCLAIR	72.8	61.3	14.4	171.8	30.4
EGAN	68.6	60.4	16.1	175.5	30.8
FORTUNA	60.2	61.3	14.5	175.5	36.6
LANNING	72.1	61.7	15.4	171.7	28.8
LCS BUSTER	78.8	59.4	13.0	180.0	30.8
LCS CANNON	69.8	63.8	14.5	170.5	28.5
LCS REBEL	71.7	62.8	15.1	172.3	32.9
MCNEAL	69.0	60.9	14.9	176.2	32.1
MS Barracuda	66.0	62.0	15.5	170.8	28.1
MS Chevelle	73.7	62.1	13.8	172.4	28.8
MS Rancho	72.9	61.6	14.1	171.4	30.3
MT 1716	73.6	62.8	14.6	172.3	30.2
MT 1855	75.4	61.4	14.9	177.1	33.0
MT 1866	73.0	61.8	14.7	174.7	31.3
NP 11100135-1 CL2	69.3	60.9	15.4	173.0	28.9
NP 12100559-16	70.5	62.1	15.1	175.3	27.3
REEDER	69.5	62.2	14.8	174.2	31.4
SY 611 CL2	69.1	61.9	15.0	173.4	27.7
SY INGMAR	68.9	62.1	15.3	174.6	29.3
SY LONGMIRE	72.4	62.7	14.7	174.2	30.0
SY McCLOUD	67.8	62.7	15.3	172.3	29.8
SY Rockford	74.5	61.2	14.5	176.1	30.1
VIDA	76.2	61.1	14.5	175.2	30.8
WB 9590	68.8	62.5	14.9	172.9	26.7
WB 9707	64.1	62.1	15.4	171.1	28.3
WB 9719	74.2	64.1	14.3	176.4	28.7
WB 9879 CLP	71.5	61.8	15.2	175.3	29.9
WB GUNNISON	68.8	62.5	13.9	174.0	29.4
AVERAGE (n=64)	72.5	61.8	14.8	173.8	30.2
C.V.	7.9	1.4	3.1	0.5	3.4
PROBABILITY(LINE)	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	6.5	0.9	0.5	0.9	1.1

**2020 GRAIN YIELD (BU/AC) SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY
GROWN ACROSS MONTANA**

VARIETY / LINE	BOZEMAN	HUNTLEY	MOCCASIN	HAVRE	FORT BENTON	SIDNEY (IRRI)	AVERAGE
LCS BUSTER	104.7	92.6	45.8	60.6	61.6	107.9	78.8
VIDA	100.9	98.2	53.0	64.5	44.2	96.3	76.2
DAGMAR	99.2	93.1	53.5	70.0	44.2	95.4	75.9
MT 1855	114.4	92.9	46.4	55.7	51.7	91.1	75.4
SY Rockford	104.5	97.0	47.7	62.1	39.7	95.7	74.5
WB 9719	95.3	95.0	46.4	61.3	53.0	94.2	74.2
MS Chevelle	106.0	90.9	46.6	57.6	37.3	103.8	73.7
MT 1716	89.2	99.5	47.1	62.9	45.0	98.1	73.6
MT 1866	91.0	94.6	50.2	65.2	40.5	96.4	73.0
MS Ranchero	103.2	83.6	48.1	56.3	41.1	105.5	72.9
DUCLAIR	89.9	92.4	47.1	63.7	56.1	87.6	72.8
SY LONGMIRE	80.7	91.3	45.2	64.9	51.7	100.6	72.4
LANNING	94.6	80.9	48.7	63.7	46.0	99.0	72.1
LCS REBEL	94.3	83.1	51.4	61.0	41.3	99.0	71.7
WB 9879 CLP	86.4	88.7	51.3	63.5	53.0	86.2	71.5
NP 12100559-16	94.4	88.9	41.5	62.0	38.9	97.5	70.5
ALUM	91.8	85.6	47.7	57.5	51.6	89.0	70.5
CHOTEAU	85.2	91.0	45.0	64.4	48.0	87.6	70.2
LCS CANNON	90.2	81.6	46.5	61.1	39.4	99.7	69.8
REEDER	86.8	82.3	48.0	61.8	45.1	93.1	69.5
NP 11100135-1 CL2	89.5	89.3	44.0	63.7	28.9	100.3	69.3
SY 611 CL2	86.1	87.6	46.4	59.7	30.8	103.9	69.1
MCNEAL	82.5	93.2	46.9	57.3	48.8	85.5	69.0
SY INGMAR	92.9	87.9	42.2	57.8	32.2	100.2	68.9
WB GUNNISON	83.1	83.6	50.3	61.1	45.6	89.2	68.8
WB 9590	94.6	77.9	45.0	59.0	42.6	93.5	68.8
EGAN	84.2	89.4	41.3	62.7	53.7	80.3	68.6
CORBIN	89.7	84.9	44.7	56.0	43.1	92.1	68.4
SY McCLOUD	91.4	80.6	46.8	59.6	35.2	93.2	67.8
AP MURDOCK	82.8	78.3	44.2	56.6	37.8	99.5	66.5
MS Barracuda	78.0	79.2	48.0	54.8	36.7	99.0	66.0
WB 9707	90.8	73.7	48.2	49.4	37.3	85.0	64.1
FORTUNA	84.0	75.7	36.8	49.2	46.3	68.9	60.2
AVERAGE (n=64)	93.0	90.2	48.3	61.8	46.9	94.6	72.5
C.V.	6.8	5.4	8.7	4.9	9.7	5.4	7.9
PROBABILITY(LINE)	<0.001	<0.001	ns	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	10.1	7.9	-	5.3	7.4	8.5	6.5

**2020 GRAIN TEST WEIGHT (LB/BU) SUMMARY FOR THE ADVANCED SPRING WHEAT NURSERY
GROWN ACROSS MONTANA**

VARIETY / LINE	BOZEMAN	HUNTLEY	MOCCASIN	HAVRE	FORT BENTON	SIDNEY (IRRI)	SIDNEY (DRY)	AVERAGE
WB 9719	64.1	64.9	65.4	61.9	60.9	66.1	65.4	64.1
LCS CANNON	62.9	63.6	64.1	62.9	61.9	65.8	65.3	63.8
LCS REBEL	62.0	62.5	63.8	61.4	60.8	65.1	64.4	62.8
MT 1716	61.8	62.5	64.0	61.5	61.2	64.8	64.0	62.8
SY LONGMIRE	62.0	62.9	63.6	60.7	61.3	64.4	64.2	62.7
SY McCLOUD	63.1	63.3	63.8	62.8	56.3	64.9	65.0	62.7
WB 9590	61.7	62.0	63.3	62.2	60.4	63.9	64.1	62.5
WB GUNNISON	62.4	63.0	62.8	61.2	61.3	64.0	63.1	62.5
CORBIN	61.8	62.7	63.0	60.6	61.3	64.0	63.3	62.4
ALUM	62.2	62.8	62.7	59.8	61.4	63.5	64.1	62.4
DAGMAR	61.7	62.1	63.5	61.4	60.2	63.6	63.7	62.3
REEDER	61.6	62.4	63.2	61.1	59.7	63.8	63.6	62.2
NP 12100559-16	61.0	62.3	63.1	61.4	59.3	64.4	63.5	62.1
SY INGMAR	62.3	63.0	63.7	61.2	56.1	65.0	63.8	62.1
MS Chevelle	61.9	61.9	62.9	60.4	58.5	64.2	64.7	62.1
WB 9707	62.9	61.7	63.2	61.1	57.7	63.6	64.1	62.1
MS Barracuda	61.0	61.7	63.0	61.9	58.9	64.3	63.5	62.0
SY 611 CL2	61.6	63.3	63.8	61.5	53.8	64.8	64.6	61.9
WB 9879 CLP	61.0	61.7	63.3	60.8	60.0	63.2	62.7	61.8
AP MURDOCK	60.8	61.8	62.8	60.4	59.3	64.1	63.2	61.8
MT 1866	61.2	62.3	62.9	60.3	58.8	63.6	63.4	61.8
LANNING	61.5	61.8	62.8	60.1	59.7	63.1	63.0	61.7
MS Rancho	61.2	61.7	62.3	60.0	58.5	63.6	63.6	61.6
CHOTEAU	61.7	61.6	62.6	60.8	58.8	62.6	62.7	61.5
MT1053/MO8/3-4	60.5	61.8	62.1	59.1	60.6	63.1	63.0	61.4
DUCLAIR	60.7	61.8	62.3	59.5	60.7	62.6	61.6	61.3
FORTUNA	62.3	61.7	61.6	60.5	57.6	62.9	62.2	61.3
SY Rockford	60.4	61.3	62.6	59.9	58.2	63.0	62.6	61.2
VIDA	59.1	61.8	62.3	60.0	58.2	63.0	63.1	61.1
MCNEAL	60.7	61.5	61.9	58.6	59.5	62.5	61.4	60.9
NP 11100135-1 CL2	61.0	62.2	62.5	60.2	52.3	64.2	63.5	60.9
EGAN	60.0	61.1	61.6	58.6	59.6	61.6	60.3	60.4
LCS BUSTER	58.0	60.1	59.3	55.5	58.5	62.3	61.9	59.4
AVERAGE (n=64)	61.2	62.0	62.8	60.5	59.5	63.4	63.2	61.8
C.V.	1REP	0.5	0.7	0.8	3.7	0.5	0.5	1.4
PROBABILITY(LINE)	1REP	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001
LSD(0.05)	1REP	0.5	0.8	0.8	3.6	0.5	0.6	0.9

**2020 GRAIN PROTEIN (%) SUMMARY FOR THE ADVANCED SPRING WHEAT
NURSERY GROWN ACROSS MONTANA**

VARIETY / LINE	BOZEMAN	HUNTLEY	MOCCASIN	HAVRE	FORT BENTON	SIDNEY (IRRI)	SIDNEY (DRY)	AVERAGE
EGAN	16.1	17.2	14.1	15.2	16.0	16.1	18.2	16.1
MS Barracuda	14.4	16.4	13.7	14.6	17.4	15.2	16.7	15.5
WB 9707	15.0	16.4	12.7	14.7	16.5	16.1	16.6	15.4
LANNING	14.9	16.8	13.4	14.4	14.9	16.1	17.1	15.4
NP 11100135-1 CL2	15.2	16.1	13.2	14.9	16.3	15.3	16.6	15.4
SY McCLOUD	14.9	15.6	14.1	14.5	16.2	15.5	16.5	15.3
DAGMAR	14.9	16.0	13.3	14.5	15.5	16.1	16.7	15.3
SY INGMAR	15.0	15.4	14.0	14.4	16.9	15.1	16.1	15.3
WB 9879 CLP	15.2	15.4	13.7	14.4	15.7	15.2	16.8	15.2
CHOTEAU	14.4	15.3	13.3	14.1	16.9	15.6	16.3	15.1
LCS REBEL	14.1	15.7	13.2	14.4	16.0	15.4	17.0	15.1
NP 12100559-16	15.0	14.9	14.3	14.4	16.1	14.8	16.3	15.1
SY 611 CL2	14.8	15.5	13.4	14.2	15.8	14.9	16.7	15.0
WB 9590	15.0	15.2	13.2	14.1	14.5	15.3	17.2	14.9
MCNEAL	14.8	16.0	13.2	13.9	14.6	15.3	16.4	14.9
MT 1855	14.5	15.1	13.8	14.2	14.7	14.9	16.9	14.9
AP MURDOCK	14.4	15.5	13.7	14.5	15.1	14.5	16.2	14.8
REEDER	15.1	15.5	13.1	13.8	14.7	15.1	16.5	14.8
MT 1866	14.8	15.0	12.9	13.8	15.1	15.2	16.2	14.7
SY LONGMIRE	14.3	15.1	13.8	13.9	15.0	14.7	16.2	14.7
CORBIN	14.4	15.0	13.0	14.6	14.8	14.9	15.6	14.6
MT 1716	14.3	15.1	13.0	14.2	14.6	14.8	15.9	14.6
LCS CANNON	13.8	15.7	12.6	13.8	15.0	15.2	15.7	14.5
FORTUNA	14.0	15.7	13.8	14.2	13.8	15.0	15.3	14.5
VIDA	14.7	14.8	13.0	13.7	14.8	14.9	15.5	14.5
SY Rockford	14.4	15.0	13.3	13.9	14.1	14.3	16.2	14.5
DUCLAIR	13.9	15.2	12.9	14.3	14.2	15.0	15.4	14.4
WB 9719	14.0	14.6	12.9	13.6	14.2	14.6	16.0	14.3
ALUM	13.6	14.4	12.8	14.1	14.3	14.7	15.4	14.2
MS Rancho	13.7	14.8	12.7	13.9	14.7	14.0	15.1	14.1
WB GUNNISON	13.4	14.1	13.4	13.7	13.8	14.1	15.1	13.9
MS Chevelle	13.1	14.4	12.2	13.3	14.4	14.0	15.5	13.8
LCS BUSTER	12.9	13.3	12.8	13.5	12.9	12.4	13.4	13.0
AVERAGE (n=64)	14.5	15.4	13.2	14.1	15.1	15.0	16.0	14.8
C.V.	1REP	1.6	2.8	1.6	1REP	3.0	2.0	3.1
PROBABILITY(LINE)	1REP	<0.001	<0.001	<0.001	1REP	<0.001	<0.001	<0.001
LSD(0.05)	1REP	0.4	0.6	0.4	1REP	0.7	0.5	0.5

**2020 HEADING DATE (175=JUNE 24) SUMMARY FOR THE ADVANCED SPRING WHEAT
NURSERY GROWN ACROSS MONTANA**

VARIETY / LINE	BOZEMAN	HUNTLEY	MOCCASIN	HAVRE	SIDNEY (IRRI)	SIDNEY (DRY)	AVERAGE
LCS CANNON	173.8	163.7	176.0	172.3	170.3	166.6	170.5
MS Barracuda	174.9	163.3	176.7	172.3	170.3	167.2	170.8
WB 9707	174.8	165.7	176.7	172.3	170.0	167.1	171.1
MS Ranchero	174.8	163.0	178.0	174.3	170.7	167.5	171.4
DAGMAR	175.2	164.3	177.7	173.7	171.0	168.1	171.6
LANNING	174.3	164.0	178.7	175.3	171.0	166.9	171.7
DUCLAIR	175.6	164.3	178.3	174.0	170.7	167.7	171.8
CORBIN	174.8	166.0	178.3	174.7	171.3	167.5	172.1
MT 1716	175.7	165.0	178.0	173.7	172.7	168.4	172.3
SY McCLOUD	174.9	166.0	178.3	174.0	172.3	168.2	172.3
LCS REBEL	175.7	165.7	177.7	173.7	171.7	169.4	172.3
MS Chevelle	174.8	165.7	178.7	174.3	172.3	168.8	172.4
WB 9590	174.9	166.3	181.3	174.7	171.7	168.8	172.9
NP 11100135-1 CL2	175.2	165.3	179.7	174.7	174.3	168.9	173.0
AP MURDOCK	175.1	166.0	179.0	175.3	174.3	169.0	173.1
SY 611 CL2	176.6	166.7	179.0	175.3	173.7	169.3	173.4
WB GUNNISON	176.4	167.7	180.7	175.3	174.3	169.5	174.0
SY LONGMIRE	177.4	168.0	179.0	176.0	174.7	170.2	174.2
REEDER	177.4	167.3	180.7	175.3	174.0	170.7	174.2
CHOTEAU	178.1	168.0	179.7	175.0	174.7	170.3	174.3
SY INGMAR	177.6	168.3	179.3	175.0	175.3	171.8	174.6
ALUM	177.7	167.0	180.0	177.3	174.7	171.1	174.6
MT 1866	178.6	167.0	181.3	176.0	174.3	170.8	174.7
VIDA	178.4	167.7	183.0	176.3	175.0	170.7	175.2
NP 12100559-16	177.6	171.3	179.0	176.0	176.0	171.7	175.3
WB 9879 CLP	177.9	168.7	181.3	177.0	176.0	170.9	175.3
EGAN	178.1	169.3	183.3	175.7	176.0	170.6	175.5
FORTUNA	178.0	169.0	182.0	176.0	176.0	172.2	175.5
SY Rockford	179.0	170.7	181.3	177.0	176.0	172.5	176.1
MCNEAL	178.8	168.7	183.3	176.7	176.7	173.3	176.2
WB 9719	179.8	170.0	184.3	177.0	175.3	171.9	176.4
MT 1855	181.3	171.0	183.7	176.7	176.7	173.4	177.1
LCS BUSTER	184.5	171.7	186.7	181.0	179.3	176.6	180.0
AVERAGE (n=64)	176.9	166.9	179.9	175.3	173.6	169.8	173.8
C.V.	0.4	0.6	0.6	0.5	0.6	0.4	0.5
PROBABILITY(LINE)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	1.1	1.5	1.6	1.3	1.6	1.3	0.9

**2020 PLANT HEIGHT (INCHES) SUMMARY FOR THE ADVANCED SPRING WHEAT
NURSERY GROWN ACROSS MONTANA**

VARIETY / LINE	BOZEMAN	HUNTLEY	MOCCASIN	HAVRE	FORT BENTON	SIDNEY (IRRI)	SIDNEY (DRY)	AVERAGE
FORTUNA	41.7	44.0	32.8	34.8	35.7	38.2	28.8	36.6
MT 1855	35.6	38.9	31.1	33.7	32.7	34.5	24.9	33.0
LCS REBEL	35.9	39.1	30.5	31.8	32.3	34.6	25.9	32.9
MCNEAL	33.8	38.4	29.8	30.5	32.7	34.0	25.3	32.1
REEDER	33.9	38.5	29.2	29.1	31.7	34.2	23.1	31.4
DAGMAR	33.1	38.0	27.6	29.9	31.3	34.0	25.5	31.4
MT 1866	34.9	37.6	29.0	29.8	30.3	32.7	24.8	31.3
LCS BUSTER	35.7	34.3	27.7	29.7	31.3	34.0	23.2	30.8
EGAN	32.6	37.6	27.8	29.8	32.7	32.2	23.1	30.8
VIDA	33.0	35.9	28.3	30.1	28.3	35.0	24.9	30.8
ALUM	33.4	35.9	28.0	28.5	30.7	34.6	23.0	30.6
DUCLAIR	32.6	36.4	27.8	29.4	30.7	33.5	22.7	30.4
MS Ranchero	33.2	36.6	27.6	30.4	28.3	33.6	22.4	30.3
MT 1716	32.7	37.3	27.4	29.2	27.7	34.4	23.1	30.2
SY Rockford	32.8	36.2	28.5	30.3	29.0	31.2	22.7	30.1
SY LONGMIRE	30.7	33.9	28.2	28.4	30.0	32.7	26.4	30.0
CORBIN	32.7	35.8	27.0	29.2	30.7	31.5	23.1	30.0
WB 9879 CLP	32.7	36.6	27.0	27.6	29.7	32.3	23.3	29.9
SY McCLOUD	31.0	34.6	28.7	29.0	29.7	30.6	25.2	29.8
CHOTEAU	32.4	36.5	27.0	26.9	28.7	32.4	22.6	29.5
WB GUNNISON	30.8	35.2	27.6	28.3	31.0	30.2	22.7	29.4
SY INGMAR	31.4	34.6	27.2	28.4	28.7	30.7	24.3	29.3
NP 11100135-1 CL2	32.7	33.1	27.0	27.9	27.0	31.5	22.8	28.9
LANNING	30.0	33.9	26.8	28.1	30.0	31.4	21.5	28.8
MS Chevelle	31.7	35.0	26.0	27.0	26.3	31.9	23.6	28.8
WB 9719	30.8	34.3	26.7	28.6	29.0	28.5	23.2	28.7
LCS CANNON	30.9	33.6	25.5	26.7	29.0	31.0	22.5	28.5
AP MURDOCK	30.4	34.1	25.6	27.4	28.0	32.2	21.4	28.4
WB 9707	30.9	32.2	27.5	28.1	28.0	28.2	22.8	28.3
MS Barracuda	30.0	33.1	25.9	27.4	27.7	30.7	21.9	28.1
SY 611 CL2	29.6	32.3	26.4	28.5	25.3	29.9	21.6	27.7
NP 12100559-16	28.6	33.4	26.1	25.4	26.7	29.2	22.1	27.3
WB 9590	27.6	30.1	24.9	26.3	28.7	28.8	20.6	26.7
AVERAGE (n=64)	32.6	36.0	27.6	29.1	29.7	32.6	23.4	30.2
C.V.	2.5	2.9	3.1	3.9	4.3	3.8	5.9	3.4
PROBABILITY(LINE)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	1.3	1.7	1.5	1.9	2.1	2.1	2.2	1.1

2020 ADVANCED SPRING WHEAT NURSERY, BOZEMAN (DRY)

VARIETY / LINE	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	STEM SOLIDNESS (5-25)
ALUM	177.7	33.4	91.8	62.2	13.6	8.6
AP MURDOCK	175.1	30.4	82.8	60.8	14.4	9.9
CHOTEAU	178.1	32.4	85.2	61.7	14.4	24.0
CORBIN	174.8	32.7	89.7	61.8	14.4	14.8
DAGMAR	175.2	33.1	99.2	61.7	14.9	22.2
DUCLAIR	175.6	32.6	89.9	60.7	13.9	21.8
EGAN	178.1	32.6	84.2	60.0	16.1	8.5
FORTUNA	178.0	41.7	84.0	62.3	14.0	13.8
LANNING	174.3	30.0	94.6	61.5	14.9	8.7
LCS BUSTER	184.5	35.7	104.7	58.0	12.9	17.2
LCS CANNON	173.8	30.9	90.2	62.9	13.8	9.2
LCS REBEL	175.7	35.9	94.3	62.0	14.1	9.8
MCNEAL	178.8	33.8	82.5	60.7	14.8	8.1
MS Barracuda	174.9	30.0	78.0	61.0	14.4	10.1
MS Chevelle	174.8	31.7	106.0	61.9	13.1	6.9
MS Ranchero	174.8	33.2	103.2	61.2	13.7	9.9
MT 1716	175.7	32.7	89.2	61.8	14.3	10.0
MT 1855	181.3	35.6	114.4	60.5	14.5	17.8
MT 1866	178.6	34.9	91.0	61.2	14.8	12.1
NP 11100135-1 CL2	175.2	32.7	89.5	61.0	15.2	10.1
NP 12100559-16	177.6	28.6	94.4	61.0	15.0	10.9
REEDER	177.4	33.9	86.8	61.6	15.1	8.2
SY 611 CL2	176.6	29.6	86.1	61.6	14.8	10.9
SY INGMAR	177.6	31.4	92.9	62.3	15.0	10.6
SY LONGMIRE	177.4	30.7	80.7	62.0	14.3	19.5
SY McCLOUD	174.9	31.0	91.4	63.1	14.9	10.2
SY Rockford	179.0	32.8	104.5	60.4	14.4	9.2
VIDA	178.4	33.0	100.9	59.1	14.7	14.5
WB 9590	174.9	27.6	94.6	61.7	15.0	9.8
WB 9707	174.8	30.9	90.8	62.9	15.0	9.8
WB 9719	179.8	30.8	95.3	64.1	14.0	7.5
WB 9879 CLP	177.9	32.7	86.4	61.0	15.2	24.7
WB GUNNISON	176.4	30.8	83.1	62.4	13.4	13.6
MEAN (n=64)	176.9	32.6	93.0	61.2	14.5	15.4
C.V.	0.4	2.5	6.8	1REP	1REP	12.8
PROBABILITY (ENTRY)	<0.001	<0.001	<0.001	1REP	1REP	<0.001
LSD(0.05)	1.1	1.3	10.1	1REP	1REP	3.2

2020 ADVANCED SPRING WHEAT NURSERY, HUNTLEY (DRY)

VARIETY / LINE	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	FOLIAR DISEASE (1-5)
ALUM	167.0	35.9	85.6	62.8	14.4	4.5
AP MURDOCK	166.0	34.1	78.3	61.8	15.5	2
CHOTEAU	168.0	36.5	91.0	61.6	15.3	3.5
CORBIN	166.0	35.8	84.9	62.7	15.0	4.5
DAGMAR	164.3	38.0	93.1	62.1	16.0	2.5
DUCLAIR	164.3	36.4	92.4	61.8	15.2	5
EGAN	169.3	37.6	89.4	61.1	17.2	2
FORTUNA	169.0	44.0	75.7	61.7	15.7	4.5
LANNING	164.0	33.9	80.9	61.8	16.8	2.5
LCS BUSTER	171.7	34.3	92.6	60.1	13.3	2.5
LCS CANNON	163.7	33.6	81.6	63.6	15.7	2.5
LCS REBEL	165.7	39.1	83.1	62.5	15.7	2
MCNEAL	168.7	38.4	93.2	61.5	16.0	2
MS Barracuda	163.3	33.1	79.2	61.7	16.4	2.5
MS Chevelle	165.7	35.0	90.9	61.9	14.4	3.5
MS Ranchero	163.0	36.6	83.6	61.7	14.8	2
MT 1716	165.0	37.3	99.5	62.5	15.1	2
MT 1855	171.0	38.9	92.9	61.8	15.1	3
MT 1866	167.0	37.6	94.6	62.3	15.0	3
NP 11100135-1 CL2	165.3	33.1	89.3	62.2	16.1	3.5
NP 12100559-16	171.3	33.4	88.9	62.3	14.9	2.5
REEDER	167.3	38.5	82.3	62.4	15.5	2
SY 611 CL2	166.7	32.3	87.6	63.3	15.5	2
SY INGMAR	168.3	34.6	87.9	63.0	15.4	4
SY LONGMIRE	168.0	33.9	91.3	62.9	15.1	4.5
SY McCLOUD	166.0	34.6	80.6	63.3	15.6	5
SY Rockford	170.7	36.2	97.0	61.3	15.0	2
VIDA	167.7	35.9	98.2	61.8	14.8	2.5
WB 9590	166.3	30.1	77.9	62.0	15.2	3
WB 9707	165.7	32.2	73.7	61.7	16.4	3.5
WB 9719	170.0	34.3	95.0	64.9	14.6	4.5
WB 9879 CLP	168.7	36.6	88.7	61.7	15.4	4.5
WB GUNNISON	167.7	35.2	83.6	63.0	14.1	5
MEAN (n=64)	166.9	36.0	90.2	62.0	15.4	3.2
C.V.	0.6	2.9	5.4	0.5	1.6	22.8
PROBABILITY (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	1.5	1.7	7.9	0.5	0.4	1.5

2020 ADVANCED SPRING WHEAT NURSERY, HAVRE (DRY)

VARIETY / LINE	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	SAW FYL CUT (%)
ALUM	177.3	28.5	57.5	59.8	14.1	2.3
AP MURDOCK	175.3	27.4	56.6	60.4	14.5	8.3
CHOTEAU	175.0	26.9	64.4	60.8	14.1	2.0
CORBIN	174.7	29.2	56.0	60.6	14.6	2.0
DAGMAR	173.7	29.9	70.0	61.4	14.5	0.3
DUCLAIR	174.0	29.4	63.7	59.5	14.3	2.3
EGAN	175.7	29.8	62.7	58.6	15.2	6.7
FORTUNA	176.0	34.8	49.2	60.5	14.2	7.0
LANNING	175.3	28.1	63.7	60.1	14.4	6.7
LCS CANNON	172.3	26.7	61.1	62.9	13.8	5.3
LCS REBEL	173.7	31.8	61.0	61.4	14.4	6.7
LCS BUSTER	181.0	29.7	60.6	55.5	13.5	1.0
MCNEAL	176.7	30.5	57.3	58.6	13.9	13.3
MS Barracuda	172.3	27.4	54.8	61.9	14.6	8.7
MS Chevelle	174.3	27.0	57.6	60.4	13.3	2.3
MS Rancho	174.3	30.4	56.3	60.0	13.9	12.0
MT 1716	173.7	29.2	62.9	61.5	14.2	8.7
MT 1855	176.7	33.7	55.7	59.1	14.2	2.3
MT 1866	176.0	29.8	65.2	60.3	13.8	0.7
NP 11100135-1 CL2	174.7	27.9	63.7	60.2	14.9	3.7
NP 12100559-16	176.0	25.4	62.0	61.4	14.4	2.3
REEDER	175.3	29.1	61.8	61.1	13.8	5.3
SY 611 CL2	175.3	28.5	59.7	61.5	14.2	2.0
SY INGMAR	175.0	28.4	57.8	61.2	14.4	8.3
SY LONGMIRE	176.0	28.4	64.9	60.7	13.9	3.7
SY McCLOUD	174.0	29.0	59.6	62.8	14.5	7.0
SY Rockford	177.0	30.3	62.1	59.9	13.9	2.3
VIDA	176.3	30.1	64.5	60.0	13.7	2.0
WB 9590	174.7	26.3	59.0	62.2	14.1	5.0
WB 9707	172.3	28.1	49.4	61.1	14.7	26.7
WB 9719	177.0	28.6	61.3	61.9	13.6	5.7
WB 9879 CLP	177.0	27.6	63.5	60.8	14.4	0.7
WB GUNNISON	175.3	28.3	61.1	61.2	13.7	0.0
MEAN (n=64)	175.3	29.1	61.8	60.5	14.1	5.0
C.V.	0.5	3.9	4.9	0.8	1.6	81.5
PROBABILITY (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	1.3	1.9	5.3	0.8	0.4	6.6

2020 ADVANCED SPRING WHEAT NURSERY, MOCCASIN (DRY)

VARIETY / LINE	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)
ALUM	180.0	28.0	47.7	62.7	12.8
AP MURDOCK	179.0	25.6	44.2	62.8	13.7
CHOTEAU	179.7	27.0	45.0	62.6	13.3
CORBIN	178.3	27.0	44.7	63.0	13.0
DAGMAR	177.7	27.6	53.5	63.5	13.3
DUCLAIR	178.3	27.8	47.1	62.3	12.9
EGAN	183.3	27.8	41.3	61.6	14.1
FORTUNA	182.0	32.8	36.8	61.6	13.8
LANNING	178.7	26.8	48.7	62.8	13.4
LCS CANNON	176.0	25.5	46.5	64.1	12.6
LCS REBEL	177.7	30.5	51.4	63.8	13.2
LCS BUSTER	186.7	27.7	45.8	59.3	12.8
MCNEAL	183.3	29.8	46.9	61.9	13.2
MS Barracuda	176.7	25.9	48.0	63.0	13.7
MS Chevelle	178.7	26.0	46.6	62.9	12.2
MS Ranchero	178.0	27.6	48.1	62.3	12.7
MT 1716	178.0	27.4	47.1	64.0	13.0
MT 1855	183.7	31.1	46.4	62.1	13.8
MT 1866	181.3	29.0	50.2	62.9	12.9
NP 11100135-1 CL2	179.7	27.0	44.0	62.5	13.2
NP 12100559-16	179.0	26.1	41.5	63.1	14.3
REEDER	180.7	29.2	48.0	63.2	13.1
SY 611 CL2	179.0	26.4	46.4	63.8	13.4
SY INGMAR	179.3	27.2	42.2	63.7	14.0
SY LONGMIRE	179.0	28.2	45.2	63.6	13.8
SY McCLOUD	178.3	28.7	46.8	63.8	14.1
SY Rockford	181.3	28.5	47.7	62.6	13.3
VIDA	183.0	28.3	53.0	62.3	13.0
WB 9590	181.3	24.9	45.0	63.3	13.2
WB 9707	176.7	27.5	48.2	63.2	12.7
WB 9719	184.3	26.7	46.4	65.4	12.9
WB 9879 CLP	181.3	27.0	51.3	63.3	13.7
WB GUNNISON	180.7	27.6	50.3	62.8	13.4
MEAN (n=64)	179.9	27.6	48.3	62.8	13.2
C.V.	0.6	3.1	8.7	0.7	2.8
PROBABILITY (ENTRY)	<0.001	<0.001	ns	<0.001	<0.001
LSD(0.05)	1.6	1.5	-	0.8	0.6

2020 ADVANCED SPRING WHEAT NURSERY, SIDNEY (DRY)

VARIETY / LINE	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)
ALUM	171.1	23.0	40.4	64.1	15.4
AP MURDOCK	169.0	21.4	33.6	63.2	16.2
CHOTEAU	170.3	22.6	38.8	62.7	16.3
CORBIN	167.5	23.1	31.6	63.3	15.6
DAGMAR	168.1	25.5	42.7	63.7	16.7
DUCLAIR	167.7	22.7	37.3	61.6	15.4
EGAN	170.6	23.1	34.4	60.3	18.2
FORTUNA	172.2	28.8	32.7	62.2	15.3
LANNING	166.9	21.5	38.1	63.0	17.1
LCS BUSTER	176.6	23.2	46.0	61.9	13.4
LCS CANNON	166.6	22.5	36.6	65.3	15.7
LCS REBEL	169.4	25.9	37.8	64.4	17.0
MCNEAL	173.3	25.3	39.2	61.4	16.4
MS Barracuda	167.2	21.9	31.6	63.5	16.7
MS Chevelle	168.8	23.6	34.1	64.7	15.5
MS Rancho	167.5	22.4	37.8	63.6	15.1
MT 1716	168.4	23.1	41.6	64.0	15.9
MT 1855	173.4	24.9	37.5	63.0	16.9
MT 1866	170.8	24.8	40.9	63.4	16.2
NP 11100135-1 CL2	168.9	22.8	41.4	63.5	16.6
NP 12100559-16	171.7	22.1	34.9	63.5	16.3
REEDER	170.7	23.1	43.8	63.6	16.5
SY 611 CL2	169.3	21.6	37.6	64.6	16.7
SY INGMAR	171.8	24.3	46.0	63.8	16.1
SY LONGMIRE	170.2	26.4	40.4	64.2	16.2
SY McCLOUD	168.2	25.2	37.0	65.0	16.5
SY Rockford	172.5	22.7	38.3	62.6	16.2
VIDA	170.7	24.9	46.2	63.1	15.5
WB 9590	168.8	20.6	36.2	64.1	17.2
WB 9707	167.1	22.8	34.5	64.1	16.6
WB 9719	171.9	23.2	42.2	65.4	16.0
WB 9879 CLP	170.9	23.3	35.6	62.7	16.8
WB GUNNISON	169.5	22.7	34.9	63.1	15.1
MEAN (n=64)	169.8	23.4	40.0	63.2	16.0
C.V.	0.4	5.9	10.5	0.5	2.0
PROBABILITY (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	1.3	2.2	7.3	0.6	0.5

poor standing in 2020

2020 ADVANCED SPRING WHEAT NURSERY, SIDNEY (IRRIGATION)

VARIETY / LINE	HEADING DATE (JULIAN)	PLANT HEIGHT (IN.)	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)
ALUM	174.7	34.6	89.0	63.5	14.7
AP MURDOCK	174.3	32.2	99.5	64.1	14.5
CHOTEAU	174.7	32.4	87.6	62.6	15.6
CORBIN	171.3	31.5	92.1	64.0	14.9
DAGMAR	171.0	34.0	95.4	63.6	16.1
DUCLAIR	170.7	33.5	87.6	62.6	15.0
EGAN	176.0	32.2	80.3	61.6	16.1
FORTUNA	176.0	38.2	68.9	62.9	15.0
LANNING	171.0	31.4	99.0	63.1	16.1
LCS CANNON	170.3	31.0	99.7	65.8	15.2
LCS REBEL	171.7	34.6	99.0	65.1	15.4
LCS BUSTER	179.3	34.0	107.9	62.3	12.4
MCNEAL	176.7	34.0	85.5	62.5	15.3
MS Barracuda	170.3	30.7	99.0	64.3	15.2
MS Chevelle	172.3	31.9	103.8	64.2	14.0
MS Ranchero	170.7	33.6	105.5	63.6	14.0
MT 1716	172.7	34.4	98.1	64.8	14.8
MT 1855	176.7	34.5	91.1	63.1	14.9
MT 1866	174.3	32.7	96.4	63.6	15.2
NP 11100135-1 CL2	174.3	31.5	100.3	64.2	15.3
NP 12100559-16	176.0	29.2	97.5	64.4	14.8
REEDER	174.0	34.2	93.1	63.8	15.1
SY 611 CL2	173.7	29.9	103.9	64.8	14.9
SY INGMAR	175.3	30.7	100.2	65.0	15.1
SY LONGMIRE	174.7	32.7	100.6	64.4	14.7
SY McCLOUD	172.3	30.6	93.2	64.9	15.5
SY Rockford	176.0	31.2	95.7	63.0	14.3
VIDA	175.0	35.0	96.3	63.0	14.9
WB 9590	171.7	28.8	93.5	63.9	15.3
WB 9707	170.0	28.2	85.0	63.6	16.1
WB 9719	175.3	28.5	94.2	66.1	14.6
WB 9879 CLP	176.0	32.3	86.2	63.2	15.2
WB GUNNISON	174.3	30.2	89.2	64.0	14.1
MEAN (n=64)	173.6	32.6	94.6	63.4	15.0
C.V.	0.6	3.8	5.4	0.5	3.0
PROBABILITY (ENTRY)	<0.001	<0.001	<0.001	<0.001	<0.001
LSD(0.05)	1.6	2.1	8.5	0.5	0.7

2020 ADVANCED SPRING WHEAT NURSERY, FORT BENTON (DRY)

VARIETY / LINE	PLANT HEIGHT (IN.)	YIELD (BU/AC)	TEST WEIGHT (LB/BU)	PROTEIN (%)	SAW FLY CUT (%)
ALUM	30.7	51.6	61.4	14.3	41.7
AP MURDOCK	28.0	37.8	59.3	15.1	40.0
CHOTEAU	28.7	48.0	58.8	16.9	11.7
CORBIN	30.7	43.1	61.3	14.8	26.7
DAGMAR	31.3	44.2	60.2	15.5	13.3
DUCLAIR	30.7	56.1	60.7	14.2	11.7
EGAN	32.7	53.7	59.6	16.0	43.3
FORTUNA	35.7	46.3	57.6	13.8	20.0
LANNING	30.0	46.0	59.7	14.9	45.0
LCS BUSTER	31.3	61.6	58.5	12.9	41.7
LCS CANNON	29.0	39.4	61.9	15.0	35.0
LCS REBEL	32.3	41.3	60.8	16.0	33.3
MCNEAL	32.7	48.8	59.5	14.6	50.0
MS Barracuda	27.7	36.7	58.9	17.4	36.7
MS Chevelle	26.3	37.3	58.5	14.4	41.7
MS Rancho	28.3	41.1	58.5	14.7	41.7
MT 1716	27.7	45.0	61.2	14.6	60.0
MT 1855	32.7	51.7	60.6	14.7	26.7
MT 1866	30.3	40.5	58.8	15.1	21.7
NP 11100135-1 CL2	27.0	28.9	52.3	16.3	45.0
NP 12100559-16	26.7	38.9	59.3	16.1	40.0
REEDER	31.7	45.1	59.7	14.7	38.3
SY 611 CL2	25.3	30.8	53.8	15.8	45.0
SY INGMAR	28.7	32.2	56.1	16.9	53.3
SY LONGMIRE	30.0	51.7	61.3	15.0	25.0
SY McCLOUD	29.7	35.2	56.3	16.2	36.7
SY Rockford	29.0	39.7	58.2	14.1	46.7
VIDA	28.3	44.2	58.2	14.8	20.0
WB 9590	28.7	42.6	60.4	14.5	28.3
WB 9707	28.0	37.3	57.7	16.5	70.0
WB 9719	29.0	53.0	60.9	14.2	36.7
WB 9879 CLP	29.7	53.0	60.0	15.7	6.7
WB GUNNISON	31.0	45.6	61.3	13.8	23.3
MEAN (n=64)	29.7	46.9	59.5	15.1	29.9
C.V.	4.3	9.7	3.7	1REP	26.6
PROBABILITY (ENTRY)	<0.001	<0.001	<0.01	1REP	<0.001
LSD(0.05)	2.1	7.4	3.6	1REP	12.9

**2020 OVERALL AGRONOMIC SUMMARY FOR SPRING WHEAT OFF-STATION NURSERY GROWN IN 16 ENVIRONMENTS,
INCLUDING 12 DRYLAND AND 4 IRRIGATED ENVIRONMENTS ACROSS MONTANA**

LINE	VARIETY / PEDIGREE	YIELD (BU/AC)			GRAIN PROTEIN (%)			HEADING DATE (JULIAN)	HEIGHT (INCHES)	TEST WEIGHT (LB/BU)	SAW FLY CUT (%)	LODGING (%)	FALLING NUMBER
		Total	Rain fed	Irrigation	Total	Rain fed	Irrigation	Total	Total	Total	Total	Total	Total
CI 13596	FORTUNA	59.4	47.2	96.0	14.5	14.5	14.4	175.5	<u>38.0</u>	60.5	<u>4.3</u>	<u>23.0</u>	390
ND 695	REEDER	66.3	54.0	103.1	14.5	14.4	14.7	174.7	33.3	61.1	<u>8.1</u>	3.4	371
PI 633974	CHOTEAU	70.6	55.9	<u>114.8</u>	14.4	14.4	14.3	174.8	30.9	60.6	3.8	1.4	387
PI 642366	VIDA	<u>72.7</u>	<u>61.0</u>	108.0	13.9	13.6	14.5	175.4	31.8	60.2	3.2	0.9	379
PI 660981	DUCLAIR	<u>73.9</u>	<u>57.8</u>	<u>122.2</u>	14.2	14.3	14.0	172.9	31.3	60.1	3.0	1.7	364
BZ 996434	CORBIN	66.8	52.8	108.7	14.5	14.6	14.2	<u>172.4</u>	31.4	60.8	2.4	12.5	385
WB9879CLP	WB9879CLP	<u>72.7</u>	56.9	<u>120.4</u>	14.5	14.6	13.9	175.1	31.0	61.1	0.9	0.0	<u>397</u>
BZ 92413R	WB GUNNISON	68.5	54.8	109.6	13.8	13.9	13.4	174.2	30.2	61.3	0.7	0.0	396
AGRIPR 10	BRENNAN	66.5	50.9	113.4	15.0	15.2	14.4	<u>172.6</u>	28.6	<u>62.3</u>	<u>6.5</u>	0.0	393
AGRIPR 14	SY SOREN	68.1	54.0	110.5	14.8	14.8	14.6	173.6	29.3	61.4	<u>8.8</u>	0.0	<u>416</u>
PI 671855	EGAN	68.3	56.0	105.1	<u>15.8</u>	<u>15.6</u>	<u>16.2</u>	176.2	32.1	59.4	<u>9.9</u>	0.0	<u>414</u>
PI 676978	LANNING	<u>71.6</u>	56.7	<u>116.3</u>	14.6	14.5	15.1	<u>171.7</u>	30.8	60.7	<u>6.5</u>	0.0	364
PI 679964	NS PRESSER CLP	-	-	-	-	-	-	-	-	-	-	-	-
PI 690450	DAGMAR	<u>74.4</u>	<u>59.7</u>	<u>118.6</u>	14.7	14.7	14.9	173.1	32.0	61.3	1.8	5.8	<u>399</u>
AGRIPR141	SY INGMAR	66.3	52.7	107.2	14.8	14.9	14.6	175.3	30.4	61.6	<u>8.7</u>	0.0	<u>426</u>
LIMAGR143	LCS PRO	68.8	53.7	114.2	14.3	14.3	14.3	173.6	34.4	61.1	<u>9.7</u>	5.4	372
WSCIA	ALUM	70.8	57.0	112.1	14.0	14.0	14.1	175.0	31.5	60.7	<u>4.8</u>	1.7	342
MT 1716	MT1274/RB07	70.7	56.5	113.3	14.1	14.1	14.1	173.0	31.3	61.6	<u>10.3</u>	6.7	385
MT 1855	MT1053/MO8/3-4	<u>71.1</u>	57.2	112.9	14.2	14.2	14.1	177.4	34.2	59.9	3.5	5.0	<u>400</u>
MT 1866	Vida*4/Conan	<u>71.3</u>	<u>58.4</u>	110.1	14.1	14.0	14.5	175.0	32.7	60.6	2.1	20.0	386
	MEAN	69.4	55.6	110.7	14.4	14.4	14.4	174.4	31.9	60.8	5.2	4.4	387
	PROBABILITY (LINE)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	ns	<0.001
	LSD (5%)	3.6	3.5	7.8	0.3	0.4	0.6	1.2	0.8	0.6	6.3	-	30
	No. of environments	16	12	4	16	12	4	5	16	16	3	2	4

1) Underlined : highest or earliest value

2) Double underlined : equal value to highest or earliest value within a column based LSD(0.05)

2019 OVERALL SUMMARY FOR MILLING AND BAKING TEST FOR ADVANCED SPRING WHEAT NURSERY, (BOZEMAN, HAVRE, CONRAD)

VARIETY / LINE	Class	Wheat Protein, % (12% <i>m.b.</i>)	Single Kernel Hardness	Flour Yield, %	Flour Protein, % (14% <i>m.b.</i>)	Flour Ash, %	Wheat Ash, %	Mixing Tolerance	Mixing Time, min	Mixing Water Absorption, %	Bake Mixing Time, min	Loaf Volume (cc)	Crumb Grain Score	Bake Water Absorption, %
ALUM	HRS	14.6	67.6	71.3	13.2	0.41	1.36	3.7	3.9	65.2	7.3	1210	6.0	75.0
CHOTEAU	HRS	15.6	65.0	70.5	14.4	0.40	1.35	1.7	2.7	69.1	4.4	1123	4.7	78.5
CORBIN	HRS	15.1	61.5	70.5	13.3	0.42	1.49	2.3	4.1	65.5	8.4	1102	5.3	76.1
DAGMAR	HRS	15.4	67.2	70.5	13.8	0.41	1.33	4.7	3.7	69.2	6.2	1140	5.3	77.4
DUCLAIR	HRS	15.8	64.8	70.2	13.8	0.41	1.38	3.3	3.4	68.0	5.8	1185	6.3	77.9
EGAN	HRS	16.5	69.5	68.6	15.3	0.41	1.62	4.7	8.5	71.9	16.0	1303	6.0	83.1
FORTUNA	HRS	14.7	67.6	72.6	13.5	0.40	1.42	3.0	2.8	64.7	4.9	1110	5.0	74.2
LANNING	HRS	15.8	66.0	70.7	14.6	0.38	1.46	2.7	3.3	70.8	7.3	1237	5.3	80.9
LCS REBEL	HRS	15.4	67.4	73.7	14.3	0.38	1.29	3.3	3.9	70.3	8.6	1175	6.3	80.1
LNR 1156	HRS	15.3	70.9	70.8	13.9	0.41	1.43	2.3	3.4	65.3	6.5	1090	6.0	76.5
LNR 1751	HRS	14.9	77.4	70.6	13.9	0.38	1.38	3.3	3.5	67.3	6.8	1208	6.3	77.6
MCNEAL	HRS	15.1	80.9	69.1	13.6	0.39	1.46	5.3	6.0	70.8	12.7	1225	6.0	82.0
MT 1716	HRS	15.2	71.7	71.3	13.7	0.37	1.31	1.3	3.5	67.8	8.4	1172	5.3	77.7
MT 1855	HRS	14.9	71.7	72.3	13.7	0.41	1.33	2.7	2.5	67.4	4.2	1232	5.7	76.9
MT 1866	HRS	14.7	74.1	72.7	13.6	0.40	1.32	2.3	2.8	64.9	5.4	1155	5.7	74.8
NS PRESSER CLP	HRS	14.8	65.1	72.3	13.3	0.37	1.47	1.7	3.1	66.5	6.4	1057	4.7	75.5
REEDER	HRS	15.4	67.8	69.4	14.0	0.39	1.36	2.3	3.1	66.4	4.0	1125	5.0	75.1
SY 611 CL2	HRS	15.5	82.3	69.0	13.4	0.43	1.42	3.0	2.6	67.3	3.9	1092	5.7	77.0
SY INGMAR	HRS	15.6	74.9	72.0	14.5	0.41	1.47	3.3	4.6	69.3	10.0	1248	6.0	79.7
SY Longmire	HRS	15.5	68.9	70.8	14.2	0.38	1.42	3.7	4.0	69.4	7.1	1207	5.7	79.5
SY McCloud	HRS	16.1	71.8	69.8	14.7	0.40	1.39	2.7	3.9	71.9	7.7	1167	5.7	82.2
SY Rockford	HRS	15.0	66.6	71.4	13.4	0.41	1.36	3.7	2.6	65.7	4.2	1130	5.7	75.6
SY Valda	HRS	15.1	71.4	71.0	13.4	0.40	1.39	2.0	3.0	64.4	5.3	1095	5.7	74.3
THATCHER	HRS	15.6	75.2	69.4	14.3	0.41	1.54	3.7	3.8	66.6	8.6	1200	6.3	76.3
VIDA	HRS	14.7	73.1	72.3	13.3	0.42	1.33	2.0	3.0	66.8	4.8	1120	5.0	75.8
WB 9590	HRS	15.6	65.9	71.2	14.5	0.39	1.39	2.3	4.1	68.8	7.6	1098	5.7	78.5
WB 9668	HRS	16.7	66.1	70.6	15.3	0.40	1.49	3.0	4.1	71.5	8.3	1303	6.3	81.7
WB 9719	HRS	14.4	72.8	71.7	13.1	0.39	1.38	3.7	3.9	67.6	8.1	1055	6.0	77.8
WB 9879 CLP	HRS	15.6	59.8	68.3	14.1	0.41	1.39	1.7	1.8	63.0	2.0	1057	3.3	71.6
WB GUNNISON	HRS	14.2	75.3	67.6	12.6	0.44	1.48	5.0	5.6	64.9	13.8	1155	6.0	80.3

2019 MILLING AND BAKING TEST FOR ADVANCED SPRING WHEAT NURSERY, BOZEMAN (DRY)

VARIETY / LINE	Class	Wheat Protein, % (12% <u>m.b.</u>)	Single Kernel Hardness	Flour Yield, %	Flour Protein, % (14% <u>m.b.</u>)	Flour Ash, %	Wheat Ash, %	Mixograph Type	Mixing Tolerance	Mixing Time, min	Mixing Water Absorption, %	Bake Mixing Time, min	Loaf Volume (cc)	Crumb Grain Score	Bake Water Absorption, %	
ALUM	HRS	14.4	55	72.4	12.8	0.40	1.42	M	3	3.0	62.8	4.0	1155	7	72.5	STStrong
CHOTEAU	HRS	15.3	55	70.9	13.9	0.41	1.45	M	1	2.8	70.3	4.1	1155	5	80.5	HasStrength
CORBIN	HRS	15.1	47	69.6	13.1	0.43	1.53	M	1	4.3	68.8	7.8	1095	5	79.5	SIStrong
DAGMAR	HRS	15.3	59	69.9	13.2	0.42	1.53	MH	4	2.5	64.5	3.5	1120	5	74.7	STHasStrength
DUCLAIR	HRS	16.8	62	71.3	13.2	0.41	1.41	M	2	2.6	69.8	4.5	1145	6	79.5	STHasStrength
EGAN	HRS	17.0	54	69.1	15.3	0.41	1.77	M	5	7.3	75.3	16.1	1255	6	86.5	STBucky
FORTUNA	HRS	14.8	52	73.8	12.9	0.37	1.42	M	2	1.8	63.3	3.2	1060	5	72.5	STHasStrength
LANNING	HRS	16.0	56	71.0	14.6	0.40	1.59	M	1	2.8	73.3	5.0	1185	6	83.5	STHasStrength
LCS REBEL	HRS	14.8	60	74.2	13.9	0.42	1.48	M	3	3.6	70.5	4.9	1085	5	80.2	STHasStrength
LNK 1156	HRS	14.5	66	70.6	12.8	0.44	1.46	M	2	3.3	65.8	3.6	1020	5	75.5	HasStrength
LNK 1751	HRS	14.9	66	71.3	13.7	0.41	1.46	MH	1	2.9	68.3	3.7	1185	6	78.0	STHasStrength
MCNEAL	HRS	15.7	71	69.3	14.2	0.42	1.62	MH	5	5.2	71.9	8.9	1210	6	83.6	STBucky
MT 1716	HRS	14.9	65	72.2	13.1	0.39	1.43	M	1	2.4	65.6	3.5	1160	5	74.8	STHasStrength
MT 1855	HRS	14.7	69	72.2	13.3	0.45	1.50	MH	2	2.0	67.8	2.8	1125	6	77.5	STHasStrength
MT 1866	HRS	14.4	65	73.1	13.3	0.44	1.43	MH	2	2.0	60.9	3.2	1115	5	71.1	STHasStrength
NS PRESSER CLP	HRS	14.8	53	71.8	13.0	0.38	1.53	M	1	2.3	64.8	3.8	1030	5	74.5	HasStrength
REEDER	HRS	15.3	57	69.5	13.8	0.40	1.47	M	2	2.8	65.7	3.3	1115	5	74.4	STHasStrength
SY 611 CL2	HRS	15.2	77	69.5	12.3	0.46	1.53	MH	2	2.6	67.5	2.8	1020	5	77.2	STHasStrength
SY INGMAR	HRS	15.3	69	72.6	14.0	0.43	1.60	M	3	3.5	70.4	7.5	1155	7	80.1	STStrong
SY Longmire	HRS	15.2	64	70.9	13.7	0.41	1.53	M	4	3.2	68.4	4.4	1125	6	79.1	STVeryStrong
SY McCloud	HRS	16.0	59	70.5	14.0	0.43	1.52	MH	2	3.1	72.7	5.1	1135	6	82.4	STStrong
SY Rockford	HRS	14.2	55	72.7	12.9	0.43	1.38	MH	3	2.7	66.2	3.8	1130	6	76.4	STHasStrength
SY Valda	HRS	14.3	66	71.4	12.5	0.40	1.37	M	2	2.3	62.7	3.0	1010	5	72.4	STHasStrength
THATCHER	HRS	15.1	57	71.0	13.5	0.42	1.51	M	3	2.4	65.5	4.1	1100	6	75.2	STHasStrength
VIDA	HRS	14.7	61	73.0	13.3	0.46	1.40	M	2	2.3	69.5	3.9	1090	5	78.2	STHasStrength
WB 9590	HRS	15.3	57	70.8	14.1	0.41	1.47	MH	2	3.8	71.5	6.7	1040	5	81.2	STSIStrong
WB 9668	HRS	16.7	57	70.8	15.2	0.41	1.61	MH	2	4.1	72.7	8.0	1330	6	82.4	STSIStrong
WB 9719	HRS	14.3	64	72.4	12.9	0.43	1.44	MH	3	3.5	70.5	6.0	1000	6	80.2	STSIStrong
WB 9879 CLP	HRS	15.3	49	68.9	13.8	0.41	1.46	M	1	1.6	63.3	1.4	1010	4	72.5	SISTSomeStrength
WB GUNNISON	HRS	14.3	61	66.9	12.3	0.44	1.52	MH	5	5.0	66.9	8.2	1180	6	78.6	STBucky

2019 MILLING AND BAKING TEST FOR ADVANCED SPRING WHEAT NURSERY, HAVRE (DRY)

VARIETY / LINE	Class	Wheat Protein, % (12% <u>m.b.</u>)	Single Kernel Hardness	Flour Yield, %	Flour Protein, % (14% <u>m.b.</u>)	Flour Ash, %	Wheat Ash, %	Mixograph Type	Mixing Tolerance	Mixing Time, min	Mixing Water Absorption, %	Bake Mixing Time, min	Loaf Volume (cc)	Crumb Grain Score	Bake Water Absorption, %	
ALUM	HRS	15.3	69	71.2	13.6	0.44	1.43	MH	5	3.4	63.7	6.4	1260	5	73.4	STHasStrength
CHOTEAU	HRS	16.5	71	69.7	15.4	0.41	1.47	MH	1	2.4	67.9	3.7	1155	4	78.1	STHasStrength
CORBIN	HRS	16.3	64	71.0	14.4	0.42	1.59	MH	2	3.7	64.4	5.6	1130	6	75.6	STStrong
DAGMAR	HRS	16.3	69	70.3	15.0	0.41	1.30	H	6	3.2	66.5	5.1	1210	5	76.2	STStrong
DUCLAIR	HRS	16.1	65	69.4	14.8	0.42	1.45	MH	4	3.2	67.4	4.8	1250	7	77.1	STHasStrength
EGAN	HRS	17.0	70	68.9	16.0	0.39	1.65	MH	5	7.5	74.3	16.1	1320	6	85.0	STBucky
FORTUNA	HRS	15.6	74	72.0	14.5	0.42	1.50	MH	3	3.1	65.5	4.8	1160	6	75.2	STSIStrong
LANNING	HRS	16.7	68	70.6	15.7	0.38	1.44	MH	3	3.5	70.9	7.0	1310	5	81.1	SIStrong
LCS REBEL	HRS	16.3	70	73.2	14.8	0.37	1.29	MH	3	3.3	70.9	7.7	1230	7	81.1	STSIStrong
LNR 1156	HRS	15.9	67	70.5	14.7	0.41	1.50	M	1	2.6	66.9	3.7	1060	6	77.1	STHasStrength
LNR 1751	HRS	15.7	80	69.7	14.8	0.37	1.41	H	4	3.3	68.3	6.2	1250	7	79.0	STStrong
MCNEAL	HRS	15.4	82	68.9	14.2	0.39	1.54	MH	6	5.8	69.0	11.3	1250	5	81.2	STBucky
MT 1716	HRS	15.7	68	70.9	14.5	0.38	1.42	M	1	3.8	68.0	8.3	1195	5	78.2	STStrong
MT 1855	HRS	15.9	70	71.8	14.8	0.41	1.39	MH	3	2.7	69.4	5.1	1320	6	79.1	SISTHasStrength
MT 1866	HRS	15.8	76	72.2	14.6	0.41	1.34	M	2	2.6	68.3	5.1	1185	6	78.0	STHasStrength
NS PRESSER CLP	HRS	15.6	72	72.6	14.2	0.39	1.53	M	2	3.4	68.3	5.8	1115	5	78.0	STHasStrength
REEDER	HRS	15.9	71	69.7	14.5	0.39	1.43	MH	2	3.2	65.4	4.3	1175	5	75.1	SISTHasStrength
SY 611 CL2	HRS	15.9	86	67.3	14.3	0.46	1.53	MH	3	2.4	67.8	3.8	1100	5	77.5	STHasStrength
SY INGMAR	HRS	16.1	72	71.9	14.8	0.38	1.51	MH	3	3.7	69.0	8.0	1255	5	79.2	STHasStrength
SY Longmire	HRS	16.4	64	70.6	15.1	0.37	1.44	M	3	4.8	73.5	7.9	1235	5	83.2	STSIStrong
SY McCloud	HRS	17.0	73	69.1	15.8	0.41	1.47	MH	2	3.0	71.4	5.5	1190	5	81.1	STHasStrength
SY Rockford	HRS	15.9	71	70.7	14.4	0.42	1.45	MH	3	2.3	64.8	3.8	1100	6	74.5	STHasStrength
SY Valda	HRS	16.0	66	70.7	14.6	0.41	1.49	M	1	2.8	64.7	3.9	1080	6	74.4	SISTHasStrength
THATCHER	HRS	16.5	84	69.1	15.2	0.43	1.73	MH	4	4.3	68.4	8.9	1235	7	78.1	STSIStrong
VIDA	HRS	15.3	75	71.9	13.7	0.40	1.38	MH	2	2.9	63.5	3.7	1150	5	73.2	STHasStrength
WB 9590	HRS	16.2	62	71.3	15.3	0.39	1.45	M	1	3.0	68.4	5.6	1140	6	78.1	HasStrength
WB 9668	HRS	17.9	63	70.1	16.6	0.40	1.56	MH	2	3.0	71.7	5.4	1325	6	82.4	STBucky
WB 9719	HRS	15.3	73	71.0	14.0	0.40	1.47	MH	4	3.3	66.5	5.2	1100	7	76.2	STSIStrong
WB 9879 CLP	HRS	16.5	62	68.5	15.0	0.41	1.48	M	1	1.5	60.5	1.8	1050	3	69.2	HasStrength
WB GUNNISON	HRS	15.0	80	67.8	13.5	0.45	1.57	MH	5	4.9	65.0	9.2	1175	5	77.2	Bucky

2019 MILLING AND BAKING TEST FOR ADVANCED SPRING WHEAT NURSERY, CONRAD (DRY)

VARIETY / PEDIGREE	Class	Wheat Protein, % (12% <u>m.b.</u>)	Single Kernel Hardness	Flour Yield, %	Flour Protein, % (14% <u>m.b.</u>)	Flour Ash, %	Wheat Ash, %	Mixograph Type	Mixing Tolerance	Mixing Time, min	Mixing Water Absorption, %	Bake Mixing Time, min	Loaf Volume (cc)	Crumb Grain Score	Bake Water Absorption, %	
ALUM	HRS	14.2	79	70.2	13.1	0.38	1.24	MH	3	5.2	69.0	11.4	1215	6	79.2	STHasStrength
CHOTEAU	HRS	14.9	70	70.8	13.8	0.38	1.13	MH	3	2.9	69.1	5.5	1060	5	76.8	STSomeStrength
CORBIN	HRS	13.9	74	71.0	12.3	0.40	1.36	MH	4	4.3	63.4	11.8	1080	5	73.1	HasStrength
DAGMAR	HRS	14.6	74	71.3	13.2	0.40	1.17	M	4	5.4	76.7	9.9	1090	6	81.4	STSomeStrength
DUCLAIR	HRS	14.4	68	69.9	13.4	0.41	1.28	M	4	4.3	66.8	8.2	1160	6	77.0	STHasStrength
EGAN	HRS	15.6	85	67.9	14.6	0.43	1.45	M	4	10.8	66.0	15.9	1335	6	77.7	STBucky
FORTUNA	HRS	13.8	77	72.1	13.1	0.41	1.33	MH	4	3.5	65.3	6.8	1110	4	75.0	STHasStrength
LANNING	HRS	14.8	74	70.5	13.6	0.36	1.35	MH	4	3.6	68.3	9.9	1215	5	78.0	STHasStrength
LCS REBEL	HRS	15.0	73	73.7	14.2	0.34	1.09	MH	4	4.8	69.4	13.2	1210	7	79.1	STHasStrength
LNR 1156	HRS	15.4	80	71.2	14.3	0.37	1.34	M	4	4.2	63.3	12.2	1190	7	77.0	STHasStrength
LNR 1751	HRS	14.2	85	70.9	13.3	0.35	1.28	MH	5	4.2	65.2	10.4	1190	6	75.9	STStrong
MCNEAL	HRS	14.1	89	69.1	12.3	0.37	1.22	H	5	7.0	71.4	17.8	1215	7	81.1	STStrong
MT 1716	HRS	15.0	82	70.8	13.6	0.35	1.08	M	2	4.3	69.9	13.4	1160	6	80.1	SIStrong
MT 1855	HRS	14.0	76	73.0	12.9	0.37	1.11	MH	3	2.9	65.0	4.8	1250	5	74.2	STHasStrength
MT 1866	HRS	13.9	82	72.8	13.0	0.36	1.19	M	3	3.9	65.5	8.0	1165	6	75.2	STHasStrength
NS PRESSER CLP	HRS	13.9	71	72.6	12.6	0.35	1.36	LM	2	3.6	66.3	9.5	1025	4	74.0	STHasStrength
REEDER	HRS	14.9	75	69.1	13.7	0.37	1.17	MH	3	3.3	68.2	4.5	1085	5	75.9	STSomeStrength
SY 611 CL2	HRS	15.4	84	70.1	13.7	0.38	1.19	MH	4	2.8	66.5	5.2	1155	7	76.2	STHasStrength
SY INGMAR	HRS	15.3	84	71.6	14.6	0.41	1.30	MH	4	6.5	68.6	14.6	1335	6	79.8	STStrong
SY Longmire	HRS	14.8	79	70.8	13.8	0.35	1.30	M	4	4.1	66.4	8.9	1260	6	76.1	SmSTStrong
SY McCloud	HRS	15.4	83	69.9	14.3	0.35	1.18	MH	4	5.5	71.5	12.4	1175	6	83.2	STSIStrong
SY Rockford	HRS	14.9	74	70.8	13.0	0.38	1.24	H	5	2.9	66.0	4.9	1160	5	75.8	STHasStrength
SY Valda	HRS	15.0	82	70.9	13.0	0.38	1.31	MH	3	3.9	65.9	9.1	1195	6	76.1	STHasStrength
THATCHER	HRS	15.2	85	68.0	14.2	0.39	1.39	M	4	4.8	65.8	12.9	1265	6	75.5	STHasStrength
VIDA	HRS	14.0	84	72.1	12.9	0.40	1.20	M	2	3.8	67.3	6.8	1120	5	76.0	STHasStrength
WB 9590	HRS	15.2	79	71.5	14.1	0.36	1.24	M	4	5.5	66.5	10.4	1115	6	76.2	STHasStrength
WB 9668	HRS	15.4	78	70.8	14.1	0.38	1.29	MH	5	5.3	70.0	11.5	1255	7	80.2	SISTStrong
WB 9719	HRS	13.7	81	71.7	12.5	0.33	1.24	MH	4	4.9	65.9	13.1	1065	5	77.1	STStrong
WB 9879 CLP	HRS	15.1	68	67.5	13.4	0.40	1.22	M	3	2.2	65.3	2.8	1110	3	73.0	STHasStrength
WB GUNNISON	HRS	13.3	85	68.0	12.1	0.42	1.35	MH	5	6.8	62.8	23.9	1110	7	85.0	STStrong