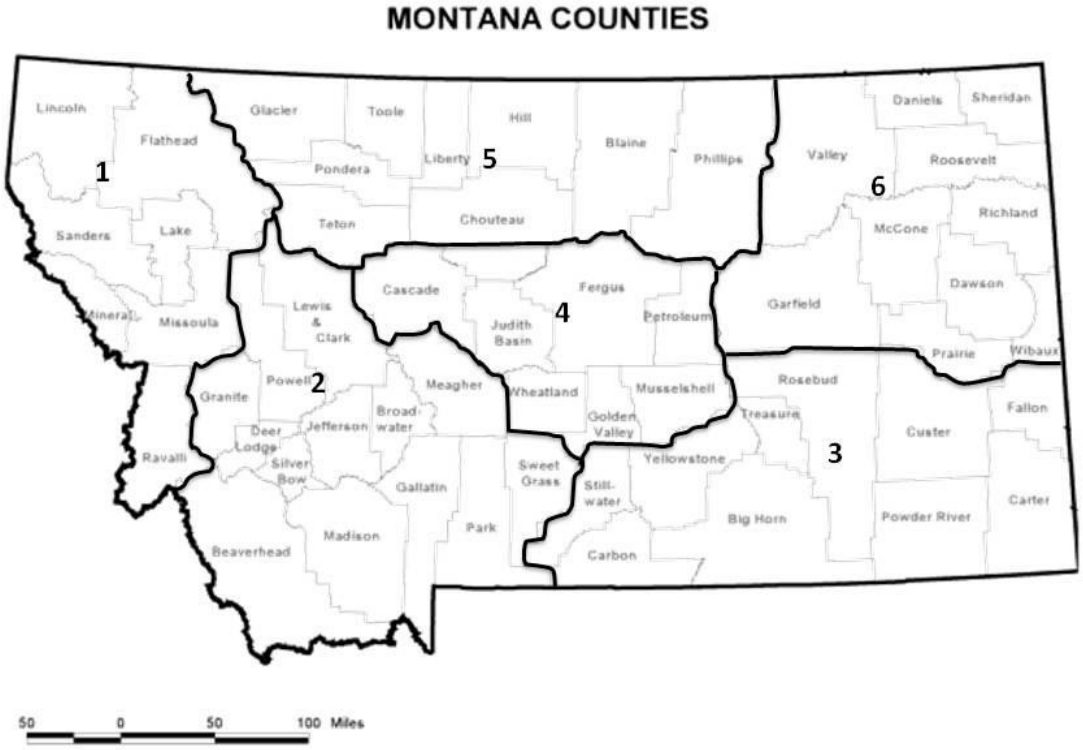
2017
Performance Evaluations for Spring Wheat



2018. 1

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 2014-2017 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 (high rainfall), Havre (dryland), Sidney (dryland and irrigated), Huntley (dryland), Moccasin (dryland) and Conrad (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.

ADDITIONAL DESCRIPTIVE INFORMATION ON SPRING WHEAT VARIETIES
Hard Red Spring Wheats

BRENNAN – Brennan was developed by Syngenta Seeds, Inc. and released to AgriPro Associates in 2009. Brennan was derived from the cross Reeder//China Scab #140/N90-0690. It is a hollow stemmed, semidwarf, hard red spring variety that has shown good adaptation across the northern plains including several areas in Montana. It is resistant to stem and leaf rust and has good tolerance to leaf spotting diseases. Its scab rating is intermediate which would make it a good choice for use under irrigation. Brennan has acceptable overall breadmaking quality. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

CHOTEAU – Developed and released by the Montana Agricultural Experiment Station in 2003. Choteau was derived from the cross of MT 9401/MT 9328. Choteau is a semidwarf hard red spring wheat with solid stems conferring tolerance to the wheat stem sawfly. The spike is lax and tapered with white awns and glumes. Kernels are red, ovate with a medium crease and brush. Choteau is resistant to the prevalent race of stem rust in Montana. Choteau has good grain protein and acceptable milling and baking quality. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

CONAN – Developed and released by WestBred, LLC. in 1999. Conan was selected from the cross WestBred Rambo/WestBred 906R. Conan is a sawfly tolerant, white chaffed, semidwarf, hard red spring wheat. The spike is mid-dense, strap shaped and awned. The seeds are elliptical with rounded cheeks. The brush is long and collared. Conan is similar to WestBred
Rambo in yield, but is 2 to 4 days earlier, .5 to .9 percentage points higher in protein, and has good milling and baking qualities. Conan is resistant to the prevalent races of stripe rust and leaf rust, and has shown good tolerance to Septoria and Tan spot. This variety is protected under the Plant Variety Protection Act.

CORBIN – Developed and released by WestBred, LLC in 2006. Corbin is a hard red spring wheat derived from the cross Border/Conan. This line is best adapted to the wheat stem sawfly areas of Montana. Corbin is a one gene semi-dwarf with moderately strong straw. Disease/sawfly ratings for Corbin show it to be moderately resistant to stripe rust and similar to Conan for sawfly tolerance. Milling and baking quality is acceptable for the market class being grown in Montana, as determined by the MSU Quality Lab. This variety is protected under the Plant Variety Protection Act.

DUCLAIR – Developed and released by the Montana Agricultural Experiment Station in 2011. Duclair was derived from a cross of Choteau//ND695/MT9433. Duclair is an awned semidwarf hard red spring wheat heading one day earlier than and growing ~ one inch taller than Choteau. Duclair generally has more solid stems than Fortuna but slightly less than Choteau. Duclair is resistant to the prevalent races of stem rust and has moderately good resistance to stripe rust in Montana. Duclair exhibits acceptable milling and baking traits. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

EGAN – developed in response to identification of the orange wheat blossom midge (OWBM) as a serious yield and quality-reducing pest of spring wheat in the Flathead Valley. The source of resistance is a single gene, referred to as *Sm1,* which causes mortality of the young larvae feeding on developing seed. Egan has the pedigree

(McNeal*5/Glupro)*2//CAP19/Choteau. Glupro was developed by North Dakota State University, and contains a chromosome segment from the wheat relative *Triticum dicoccoides*. CAP19 (Reeder/BW-277) was developed by North Dakota University and contains the *Sm1* gene for OWBM resistance. To avoid development of resistance in the OWBM to the effect of the *Sm1* gene, Egan should be grown in a 90:10 blend with an OWBM-susceptible spring wheat variety. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

FORTUNA – Developed from the cross Rescue/Chinook/3/(Frontana//Kenya58/Newthatch made at North Dakota Agricultural Experiment Station with the Crops Research Division of USDA cooperating. A joint North Dakota-Montana release was made in 1966. Fortuna is beardless with white chaff and straw. It is a solid-stemmed variety, resistant to the wheat stem sawfly. Fortuna is susceptible to Septoria and black chaff fungus. It has acceptable baking properties.

JEDD – Jedd was developed by WestBred, LLC from the cross4*Hank//SWP965-001/Teal11A and released in 2008. Jedd contains two patented genes (*L1B S653N* and *L1D S653N*) that confer tolerance to the BASF grass herbicide "Beyond" (imazimox). Jedd is semidwarf with good lodging resistance and is medium in heading and maturity. Jedd yields well and has good test weight. Jedd is moderately susceptible to races of stripe rust in western Montana and has good tolerance to Hessian fly biotypes in Washington, but the reaction is unknown for Montana biotypes. Jedd has average grain protein and acceptable milling and baking quality. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

KELBY – Kelby was developed by AgriPro and released to AgriPro Associates in 2006. Kelby was derived from the cross N97-00117/3/n92-0098//Sumai 3/Dalen. It is a hollow stemmed, semidwarf, hard red spring wheat. Kelby is an early heading spring wheat and maintains a good test weight across locations. Kelby has the Asian background (Sumai 3) for fusarium head blight resistance giving it an intermediate scab tolerance. It is resistant to stem and leaf rust and shows good tolerance to leaf spotting diseases. It shows moderate susceptibility to stripe rust. Kelby is susceptible to damage by the wheat stem sawfly. Grain protein of Kelby is good and the milling and baking quality is acceptable. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

LANNING – 'Lanning' hard red spring wheat was released by the Montana Agricultural Experiment Station due to its yield potential in dryland areas of Montana and its superior end-use quality. Lanning was derived from the cross 'Glenn'/MT0747 by single seed descent beginning in the F_2 generation. Lanning has grain yield similar to 'Vida' withhigher grain protein and stronger gluten characteristics than Vida. Lanning is hollow-stemmed, suggesting that it will be susceptible to damage caused by the wheat stem sawfly (*Cephus cinctus* Nort.). This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

McNEAL – Developed from the cross RS6880/Glenman made by the Montana Agricultural Experiment Station. It was released in March 1995. McNeal is a semidwarf, hard red spring wheat with red chaff and tan straw. The spike is awned and mid-dense. The glumes are reddish brown with some white on the outer edges of the lemma and palea. Kernels are red, ovate, medium length with a short brush. The cheeks are slightly rounded with a medium crease. Under Montana growing conditions McNeal is moderately resistant to lodging. It is moderately resistant to prevalent races of stem rust and wheat streak mosaic

virus. McNeal is moderately susceptible to leaf rust and stripe rust. It is susceptible to Russian wheat aphid and the wheat stem sawfly. Under some climatic conditions one white chaffed plant per 2,000 plants may appear in the field. McNeal's milling and baking qualities are acceptable by industry.

MOTT – Developed by North Dakota State University and released by the North Dakota Agricultural Experiment Station in 2009. Mott was released primarily for its resistance to the wheat stem sawfly and adaptation to the western region of North Dakota. It is a medium-tall, awned wheat that matures approximately 2 days later than Reeder and Choteau. Mott is susceptible to moderately susceptible to prevalent races of leaf rust. It is resistant to moderately resistant to prevalent races of stem rust. It is susceptible to tan spot and resistant to Stagonospora leaf blotch. Mott has good milling and baking characteristics and better than average grain protein content.

NS PRESSER CLP – 'NS Presser CLP' hard red spring wheat (*Triticum aestivum* L.) was developed by the Montana Agricultural Experiment Station and released in 2016 to the commercial partner Northern Seed LLC. NS Presser CLP is a two-gene Clearfield wheat intended for use with the selective imidazolinone herbicide imazamox (Beyond, BASF Corp.). NS Presser CLP was developed by a single backcross of alleles for resistance to the imidazolinone herbicide class into the recurrent parent 'Vida'. Yield trials at sites in Montana showed that NS Presser CLP has yield potential under dryland production similar to Vida. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

ONEAL – ONeal is a hard red spring wheat developed by WestBred, LLC from the cross McNeal/WestBred 906R and was released in 2008. ONeal is a hollow stemmed, semidwarf wheat with red chaff. ONeal heads about the same as McNeal and one day later than Choteau. ONeal is susceptible to stripe rust. Test weight of ONeal is average with grain protein, milling and baking traits similar to McNeal. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

REEDER – Developed by the North Dakota Agricultural Experiment Station from the cross IAS#4/H567.71//Stoa/3/ND674. Reeder was released in 1999. Reeder is an awned, semidwarf hard red spring wheat. Reeder yields well especially in northeastern Montana and western North Dakota. Reeder has resistance to the upper Midwest races of stem and leaf rust. Milling and baking qualities are acceptable. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

SY TYRA – SY Tyra is a hard red spring wheat initially developed at Montana State University for release by Syngenta Seeds, Inc. It originated from a marker assisted backcross project with the final cross as Choteau/4*Norpro. It has a semi-solid stem which confers some tolerance to the wheat stem sawfly. Yield performance has been very good statewide. Test weight has been very high averaging one pound heavier than Choteau. It has medium maturity similar to Reeder. It is a short semidwarf with very good straw strength. Overall milling and baking characteristics are acceptable. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

SY SOREN – SY Soren is a hollow stemmed, hard red spring wheat developed by Syngenta Seeds, Inc. and released to AgriPro Associates in 2011. PVP, Title V certificate was issued in 2012. SY Soren was derived from the cross Norpro/Kelby. It has medium

maturity and very good test weight. It is a short semi-dwarf, similar to Brennan. Straw strength is very good, between Kelby and Kuntz. It is resistant to stem rust and moderately resistant to leaf rust. It has very good tolerance to Fusarium head blight. Overall quality of SY Soren is acceptable. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

VIDA – Vida was derived from the cross of Scholar/Reeder made in 1998 by the Montana Agricultural Experiment Station. Vida was released in 2005. Vida is a high yielding hard red spring with moderate resistance to leaf and stripe rust but is moderately susceptible to stem rust. Vida is a semidwarf wheat with white glumes and awns. Kernels are red, ovate with rounded cheeks and a mid-deep crease. Vida has good milling and baking characteristics. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

VOLT – Volt is a hard red spring wheat developed by Dr. Peter Franck with the plant breeding company, PZO Pflanzenzucht Oberlimpurg, in Germany and has been thoroughly tested by WestBred,LLC and released in 2008. Volt is a high yielding semidwarf wheat under irrigated conditions with good tolerance to stripe rust and fusarium head blight. Volt heads four days later than Hank. Volt is a hollow stemmed wheat susceptible to wheat stem sawfly damage. Volt has fair milling and baking quality. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

WB GUNNISON – A hard red spring wheat developed by WestBred from the cross Conan/Agawam and released in 2011. WB-Gunnison is being released as a high quality hard red spring wheat that is intended to replace Conan and Corbin acres. Milling and baking quality data indicate that WB-Gunnison has acceptable quality. Disease/sawfly ratings for W B- Gunnison show it to be MR to stripe rust. WB-Gunnison is a hollow stemmed variety, but has high yields under wheat stem sawfly pressure due to relative non-preference in small plot nursery trials. This variety is protected under the Plant Variety Protection Act and can only be sold or advertised by variety name as a class of certified seed.

WB9879CLP – WB9879CLP was derived from the cross of Choteau*3//Choteau/IMI8134 made in 2004 to be used as a Clearfield wheat. WB9879CLP is an awned semidwarf hard red spring wheat heading one and a half days later than Choteau while plant height is 30 inches the same as Choteau. WB9879CLP has solid stems similar to Choteau averaging 20-23 over two years. WB9879CLP exhibits acceptable milling and baking quality traits similar to Choteau. WB9879CLP is currently licensed exclusively to WestBred-Monsanto with PVP title V protection.

HRS 3504 is a hard red spring wheat developed for CROPLAN by WinField United from a cross of Brogan / Howard. US Patent certificate was issued in 2015. HRS 3504 is being released as having medium short height and maturity, and average protein and test weight. Its straw strength is excellent and it's resistant to stripe and leaf rust. It is CROPLAN's best for bacterial leaf streak and pre-sprouting tolerance. HRS 3504 has average grain protein and acceptable milling and baking quality. HRS 3504 is currently licensed exclusively to CROPLAN by WinField United and protected under the US patent law. Seed can only be used as quality assured grown by variety name

HRS 3530 is a hard red spring wheat developed for CROPLAN by WinField United from a cross of Samson / Faller. US Patent certificate was issued in 2015. HRS 3530 is being

released as having medium tall height and medium maturity, and very good protein and test weight. Its straw strength is good and it is resistant to stripe, stem and leaf rust. It has good tolerance to fusarium and bacterial leaf streak. HRS 3530 has above average grain protein and acceptable milling and baking quality. HRS 3530 is currently licensed exclusively to CROPLAN by WinField United and protected under the US patent law. Seed can only be used as quality assured grown by variety name.

HRS 3616 is a hard red spring wheat developed for CROPLAN by WinField United from a cross of Kuntz / Norpro. PVP certificate was issued in 2016. HRS 3616 is being released as having high protein, medium height and medium early maturity, and very good test weight. Its straw strength is very good and it is resistant to stem and leaf rust. HRS 3616 has above average grain protein and acceptable milling and baking quality. It has shown to have very good yields in western geographies. HRS 3616 is currently licensed exclusively to CROPLAN by WinField United and protected under the Plant Variety Protection Act. Seed can only be used as quality assured grown by variety name.

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 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

2014-2017 ADVANCED SPRING WHEAT NURSERY, KALISPELL : District 1

VARIETY	YIELD (BU/AC)				TEST WEIGHT (LB/BU)				PROTEIN (%)				PLANT HEIGHT (IN)	HEADING DATE (JULIAN)
	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2016-2017	
BRENNAN	51.9	60.7	74.6	79.4	60.0	60.7	61.3	60.9	15.6	15.3	15.5	15.3	26.5	**170.9**
CHOTEAU	51.0	64.5	80.2	87.2	58.4	59.5	60.3	60.2	15.0	15.1	15.2	14.8	28.5	173.7
CORBIN	56.1	68.5	83.9	91.8	59.6	60.8	61.4	61.3	14.8	15.1	15.0	14.6	30.2	171.5
DUCLAIR	55.9	73.3	89.5	93.8	57.9	59.2	59.7	59.7	13.9	14.4	14.9	14.8	29.3	171.5
EGAN	52.7	76.8	89.8	94.7	55.9	57.7	58.9	59.3	**16.4**	**16.1**	**16.4**	**16.2**	30.6	175.2
FORTUNA	52.5	71.0	79.1	83.7	59.6	60.5	60.8	61.0	14.6	15.1	15.4	15.2	**38.6**	172.4
LANNING	55.4	67.0	80.9	90.4	56.2	58.4	59.4	59.6	15.4	15.3	15.8	15.6	27.9	172.5
WB GUNNISON	54.1	75.4	87.7	94.8	59.0	60.1	61.2	61.4	13.8	13.9	14.3	14.1	29.2	173.5
LCS PRO	54.4	77.4	93.3	**102.7**	57.4	60.0	60.8	61.0	14.9	15.0	15.2	14.9	32.9	174.0
MCNEAL	55.5	71.0	80.6	90.9	57.0	58.7	59.7	59.9	15.0	15.5	15.3	14.8	30.0	174.1
REEDER	54.0	75.3	88.3	92.3	57.9	59.8	60.8	60.8	15.5	15.4	15.2	15.0	30.3	175.5
SY INGMAR	55.8	66.0	83.7	87.9	60.2	61.0	61.7	61.5	15.2	15.8	15.8	15.7	28.5	173.2
SY SOREN	58.4	66.9	82.0	89.2	58.8	60.3	61.2	61.1	15.5	15.7	15.8	15.5	28.3	173.3
SY TYRA	58.1	71.9	83.4	87.8	**61.0**	**61.9**	**62.3**	**61.7**	14.5	14.3	14.3	14.1	26.5	173.8
THATCHER	48.8	62.2	72.8	76.6	57.3	59.1	59.8	59.7	15.3	15.2	15.5	15.1	38.2	177.3
VIDA	61.0	**78.6**	**93.6**	97.9	58.0	59.5	60.2	60.1	14.4	14.8	15.0	14.8	29.2	175.8
WB 9879CLP	53.3	63.9	80.3	85.9	59.0	59.4	60.1	60.1	15.1	15.2	15.4	15.0	28.6	173.5
SY VALDA[2)]	49.6	73.8	88.8	-	58.4	60.2	61.2	-	14.2	14.2	14.2	-	27.7	172.1
HRS 3504[1)]	58.6	83.1	-	-	57.0	59.2	-	-	13.9	13.9	-	-	27.6	175.7
HRS 3530[1)]	49.5	68.4	-	-	57.3	59.3	-	-	15.5	14.5	-	-	31.8	177.7
HRS 3616[1)]	54.0	64.9	-	-	59.3	60.1	-	-	15.1	15.5	-	-	28.0	173.0
LCS PRIME[1)]	52.6	77.2	-	-	59.7	61.4	-	-	13.8	13.7	-	-	29.3	172.7
NS PRESSER CLP[1)]	**61.4**	77.5	-	-	57.2	59.1	-	-	14.8	14.7	-	-	30.5	177.4
SY ROCKFORD[1)]	58.3	64.4	-	-	58.5	59.0	-	-	14.8	14.5	-	-	28.6	176.4

1) two year's data ('16-'17), 2) three year's data ('15-'17)

2014-2017 ADVANCED SPRING WHEAT NURSERY, BOZEMAN : District 2

VARIETY	YIELD (BU/AC)				TEST WEIGHT (LB/BU)				PROTEIN (%)				PLANT HEIGHT (IN)	HEADING DATE (JULIAN)	SOLIDNESS (5-25)
	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2016-2017		
BRENNAN	57.2	50.4	43.2	50.2	**60.8**	60.9	60.8	**61.2**	15.7	15.8	16.1	16.0	26.9	178.9	9.1
CHOTEAU	56.2	53.2	47.6	53.8	58.5	59.4	59.7	59.9	15.5	15.4	15.5	15.5	28.0	180.5	22.4
CORBIN	57.4	55.1	49.3	54.3	60.5	61.1	**61.3**	60.9	15.2	14.8	14.7	14.9	29.3	179.2	11.4
DUCLAIR	56.7	51.6	47.0	53.6	58.2	58.0	58.6	59.2	15.4	15.2	15.0	14.8	28.9	**178.5**	19.0
EGAN	53.2	48.8	44.4	48.2	58.3	58.7	58.7	58.8	**16.6**	**16.5**	**16.7**	**16.9**	27.7	182.2	7.2
FORTUNA	55.2	51.3	46.9	53.1	60.6	61.1	60.6	61.0	15.0	14.8	14.7	14.7	35.2	181.0	15.6
LANNING	60.0	57.0	53.6	59.8	59.4	59.5	60.0	60.1	15.8	15.4	15.4	15.3	27.8	179.2	7.3
LCS PRO	61.4	57.0	52.0	59.0	59.2	60.6	60.9	60.4	15.5	14.9	14.9	14.8	32.2	179.9	7.3
MCNEAL	61.1	55.5	47.9	54.1	57.6	58.4	58.7	58.7	15.6	15.3	15.3	15.2	28.8	182.4	7.4
REEDER	60.8	55.1	48.4	54.9	59.6	60.2	60.5	60.1	15.9	15.5	15.4	15.5	29.3	182.2	6.9
SY INGMAR	61.6	55.5	48.8	55.1	59.1	59.0	59.2	59.3	15.6	15.7	15.6	15.6	27.3	181.2	8.4
SY SOREN	61.3	55.6	48.8	55.6	58.6	59.3	60.4	60.0	15.6	15.5	15.7	15.8	26.6	180.9	8.6
SY TYRA	57.7	52.3	46.6	54.6	58.5	60.1	60.7	60.6	14.6	14.2	14.2	14.3	25.0	181.0	18.1
THATCHER	50.7	46.3	43.3	44.4	57.0	57.7	58.0	57.8	16.5	15.6	15.1	15.3	**37.1**	183.8	7.1
VIDA	**67.1**	**64.1**	**56.0**	**63.6**	59.7	60.2	60.3	59.8	14.9	14.6	14.8	14.8	28.9	181.4	10.6
WB 9879CLP	58.5	51.4	46.5	53.2	59.8	59.9	59.8	60.1	15.7	15.5	15.6	15.6	26.4	180.9	**23.6**
WB GUNNISON	53.8	51.6	47.3	53.7	60.4	60.3	60.8	60.3	14.8	14.5	14.3	14.4	26.6	180.4	10.5
SY VALDA[2)]	64.2	58.4	52.0	-	59.0	59.6	59.9	-	15.3	14.9	14.9	-	26.9	181.0	7.7
HRS 3504[1)]	59.0	54.2	-	-	58.7	59.3	-	-	14.6	14.5	-	-	25.5	182.2	8.2
HRS 3530[1)]	54.6	51.7	-	-	59.3	59.5	-	-	15.6	15.1	-	-	30.6	182.7	6.7
HRS 3616[1)]	63.4	59.0	-	-	60.1	60.1	-	-	15.7	15.5	-	-	28.5	180.8	7.3
LCS PRIME[1)]	62.9	59.0	-	-	60.5	**61.2**	-	-	14.4	13.9	-	-	30.1	180.5	7.9
NS PRESSER CLP[1)]	66.3	61.6	-	-	57.9	58.8	-	-	15.7	14.9	-	-	29.3	183.0	7.8
SY ROCKFORD[1)]	65.9	57.8	-	-	59.0	58.6	-	-	15.0	15.2	-	-	28.1	182.5	7.1

1) two year's data ('16-'17), 2) three year's data ('15-'17)

2014-2017 ADVANCED SPRING WHEAT NURSERY, HUNTLEY : District 3

VARIETY	YIELD (BU/AC)				TEST WEIGHT (LB/BU)				PROTEIN (%)				PLANT HEIGHT (IN)	HEADING DATE (JULIAN)
	2017	2016-2017	2015[1)]-2017	2014-2017	2017	2016-2017	2015[1)]-2017	2014-2017	2017	2016-2017	2015[1)]-2017	2014-2017	2016-2017	
BRENNAN	75.2	80.1	80.1	68.9	**63.4**	**63.6**	**63.6**	**60.2**	14.8	13.9	13.9	15.2	33.1	158.2
CHOTEAU	69.1	78.9	78.9	65.8	59.4	61.0	61.0	57.7	14.7	13.5	13.5	14.9	36.2	159.8
CORBIN	79.0	83.3	83.3	70.2	60.9	62.2	62.2	58.0	13.9	12.6	12.6	14.5	37.3	157.9
DUCLAIR	77.3	**87.7**	**87.7**	**73.3**	58.7	60.4	60.4	57.0	14.5	13.3	13.3	14.8	38.2	157.9
EGAN	81.0	80.7	80.7	68.8	59.3	60.7	60.7	57.2	**16.7**	**15.5**	**15.5**	**17.1**	37.0	160.5
FORTUNA	74.8	67.5	67.5	59.0	62.0	62.3	62.3	59.1	14.6	14.3	14.3	15.3	46.7	159.4
LANNING	82.0	80.0	80.0	69.2	61.0	61.5	61.5	57.2	14.7	13.9	13.9	15.0	35.0	**156.7**
LCS PRO	82.1	78.8	78.8	70.2	60.3	61.4	61.4	58.0	14.2	13.4	13.4	14.3	40.6	159.4
MCNEAL	65.5	74.9	74.9	63.1	57.8	59.9	59.9	56.5	15.1	13.9	13.9	15.3	37.6	160.0
REEDER	79.9	83.7	83.7	69.8	60.6	62.0	62.0	58.2	15.4	13.9	13.9	15.1	39.9	159.2
SY INGMAR	78.5	83.1	83.1	68.5	60.7	62.0	62.0	57.6	14.9	13.8	13.8	15.6	35.1	160.5
SY SOREN	80.6	81.8	81.8	67.2	60.7	62.0	62.0	58.2	15.0	13.9	13.9	15.3	33.3	159.7
SY TYRA	66.6	74.2	74.2	60.3	57.2	60.2	60.2	56.6	14.8	12.9	12.9	14.3	32.9	160.5
THATCHER	62.9	58.5	58.5	48.7	58.7	60.5	60.5	56.8	15.8	14.8	14.8	16.2	**48.7**	162.9
VIDA	**84.3**	86.7	86.7	72.5	60.3	61.0	61.0	56.9	14.4	13.0	13.0	14.5	38.1	159.5
WB 9879CLP	73.9	80.2	80.2	66.4	59.9	61.3	61.3	57.6	14.8	13.5	13.5	15.0	37.0	159.7
WB GUNNISON	70.4	78.6	78.6	65.7	58.7	60.7	60.7	57.5	13.5	13.1	13.1	14.3	33.8	159.4
SY VALDA[3)]	73.9	83.1	83.1	-	59.5	61.0	61.0	-	14.5	13.4	13.4	-	34.3	160.9
HRS 3504[2)]	69.1	78.5	-	-	57.1	59.5	-	-	14.6	12.9	-	-	33.4	161.2
HRS 3530[2)]	57.1	70.7	-	-	56.8	59.6	-	-	15.7	13.7	-	-	38.6	161.9
HRS 3616[2)]	80.5	87.1	-	-	61.3	61.9	-	-	14.6	13.7	-	-	36.0	159.7
LCS PRIME[2)]	77.7	85.6	-	-	60.8	62.0	-	-	13.6	12.4	-	-	38.4	158.7
NS PRESSER CLP[2)]	70.5	78.0	-	-	57.0	59.4	-	-	14.6	13.0	-	-	39.3	161.2
SY ROCKFORD[2)]	78.0	80.6	-	-	59.5	60.8	-	-	14.6	13.0	-	-	35.2	161.2

1) No planting in 2015, 2) two year's data ('16-'17), 3) three year's data ('15-'17)

2014-2017 ADVANCED SPRING WHEAT NURSERY, MOCCASIN : District 4

VARIETY	YIELD (BU/AC)				TEST WEIGHT (LB/BU)				PROTEIN (%)				PLANT HEIGHT (IN)	HEADING DATE (JULIAN)
	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2016-2017	
BRENNAN	31.8	32.4	30.3	33.4	**60.8**	**62.1**	61.3	**61.2**	14.9	13.7	15.0	15.4	25.2	174.4
CHOTEAU	32.9	30.3	28.7	31.0	58.4	60.4	59.9	59.8	14.8	14.1	14.8	15.0	23.9	174.9
CORBIN	30.9	29.8	28.3	30.2	57.8	60.3	59.9	59.4	15.0	14.2	14.9	15.3	24.6	175.2
DUCLAIR	34.0	33.0	32.3	33.2	56.7	59.1	58.8	58.1	14.5	13.2	13.5	14.2	25.5	174.9
EGAN	30.0	28.7	28.6	30.9	56.0	58.7	58.6	58.5	**16.1**	**15.4**	**16.2**	**16.4**	23.8	176.2
FORTUNA	30.2	27.9	28.1	30.9	57.4	59.4	59.6	59.8	14.6	13.5	13.7	14.1	26.6	176.0
LANNING	35.4	35.5	**32.6**	**34.8**	56.4	59.5	59.6	59.4	14.3	12.9	13.8	14.1	24.6	**174.0**
LCS PRO	28.1	31.3	30.7	31.1	55.9	59.7	59.8	59.2	14.5	13.2	14.1	14.5	27.1	175.5
MCNEAL	34.7	33.6	32.2	34.6	56.5	59.2	59.0	58.7	14.3	13.3	13.9	14.6	25.8	177.2
REEDER	32.4	33.9	32.3	33.9	57.4	60.2	60.2	60.2	14.7	13.4	13.7	14.1	25.3	175.7
SY INGMAR	31.8	32.1	29.8	31.6	57.6	60.4	60.3	59.7	14.8	14.0	14.9	15.2	24.6	175.7
SY SOREN	30.5	30.3	28.0	31.2	57.5	59.7	59.4	59.3	15.1	14.1	15.6	15.7	23.3	176.7
SY TYRA	30.7	32.0	29.1	31.4	59.5	61.9	**61.6**	**61.2**	14.0	12.6	13.9	14.2	23.8	175.2
THATCHER	27.3	29.4	27.4	28.4	54.2	56.5	57.0	57.4	15.9	14.3	15.1	15.4	**29.7**	177.7
VIDA	31.5	32.1	31.4	32.5	56.6	59.5	59.3	59.0	14.1	13.1	13.7	14.1	23.7	176.4
WB 9879CLP	32.1	33.3	31.2	34.7	58.6	60.3	60.1	60.2	14.7	14.1	14.7	15.0	23.9	176.0
WB GUNNISON	32.8	32.0	31.1	32.7	57.4	60.0	60.1	59.7	14.1	13.1	13.4	13.9	22.5	174.7
SY VALDA[2)]	28.8	31.8	30.0	-	57.8	60.5	60.3	-	14.8	13.3	13.7	-	23.8	176.2
HRS 3504[1)]	29.6	31.4	-	-	55.3	58.0	-	-	14.8	13.5	-	-	23.1	175.8
HRS 3530[1)]	27.8	30.3	-	-	55.9	58.9	-	-	15.4	13.9	-	-	26.4	176.5
HRS 3616[1)]	31.4	34.7	-	-	58.4	60.2	-	-	14.8	13.6	-	-	26.8	175.4
LCS PRIME[1)]	33.8	**36.8**	-	-	58.4	61.0	-	-	14.0	12.6	-	-	26.3	174.9
NS PRESSER CLP[1)]	35.6	34.1	-	-	56.2	59.3	-	-	13.8	13.4	-	-	25.6	177.0
SY ROCKFORD[1)]	**37.1**	36.6	-	-	58.2	59.4	-	-	14.4	13.8	-	-	25.6	176.9

1) two year's data ('16-'17), 2) three year's data ('15-'17)

2014-2017 ADVANCED SPRING WHEAT NURSERY, CONRAD : District 5

VARIETY	YIELD (BU/AC)				TEST WEIGHT (LB/BU)				PROTEIN (%)				PLANT HEIGHT (IN)	HEADING DATE (JULIAN)
	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2016-2017	
BRENNAN	51.6	58.3	55.5	61.5	61.1	**62.9**	**63.1**	**62.6**	**16.0**	**15.3**	15.4	14.8	26.7	171.6
CHOTEAU	60.0	60.3	56.6	61.0	58.2	60.2	60.2	59.8	15.4	14.4	14.8	14.2	28.1	172.0
CORBIN	58.1	61.9	58.5	68.4	58.1	61.2	60.7	61.0	15.3	14.2	14.4	13.9	28.4	171.4
DUCLAIR	60.9	60.5	56.8	66.3	56.9	58.7	58.1	58.8	15.0	14.3	14.9	14.1	28.4	**170.0**
EGAN	55.7	60.6	59.2	63.8	57.0	60.1	59.7	59.9	15.7	15.2	**15.7**	**15.1**	28.6	171.8
FORTUNA	54.6	58.2	55.1	61.5	58.5	60.9	60.7	60.6	14.7	14.0	14.3	14.0	31.8	173.5
LANNING	58.7	62.6	60.0	68.4	57.3	59.9	59.9	60.2	15.4	14.8	14.9	14.2	27.7	170.4
LCS PRO	56.0	58.5	57.0	68.0	57.9	61.4	60.8	60.9	15.3	14.4	14.8	14.0	29.0	171.8
MCNEAL	56.7	55.4	56.3	65.4	56.5	59.7	59.5	59.8	14.4	13.7	14.3	13.9	29.1	174.4
REEDER	**67.8**	65.6	62.1	**72.8**	58.6	60.9	60.8	61.0	15.1	14.4	14.8	14.0	28.9	173.2
SY INGMAR	53.7	61.7	56.5	62.7	59.2	61.7	61.2	61.1	15.7	14.9	15.4	14.5	28.7	173.5
SY SOREN	59.1	58.0	55.4	64.7	59.9	61.8	61.0	61.0	15.2	14.7	15.2	14.5	27.7	173.8
SY TYRA	60.1	60.0	61.7	69.1	**61.7**	62.4	62.0	61.5	13.8	13.5	13.7	13.0	27.4	173.3
THATCHER	48.5	49.0	48.3	52.4	55.3	58.9	58.9	58.7	15.4	14.2	14.5	14.1	**32.1**	176.2
VIDA	57.7	65.6	**62.4**	70.3	57.8	60.2	59.7	60.1	14.1	13.7	14.3	13.4	29.1	173.8
WB 9879CLP	64.7	62.1	57.1	66.3	59.3	60.9	60.4	60.6	15.1	14.5	15.0	14.4	28.0	173.3
WB GUNNISON	62.0	64.2	60.0	67.4	59.2	61.4	61.1	61.4	14.0	13.2	13.6	13.2	28.5	171.6
SY VALDA[2)]	57.4	64.8	60.6	-	58.5	61.6	61.5	-	14.8	13.8	14.3	-	30.4	172.8
HRS 3504[1)]	55.4	62.9	-	-	56.3	59.6	-	-	14.0	13.7	-	-	26.4	174.1
HRS 3530[1)]	56.3	58.8	-	-	56.2	59.0	-	-	15.0	13.8	-	-	29.3	175.2
HRS 3616[1)]	51.0	59.3	-	-	58.6	60.6	-	-	15.5	14.9	-	-	27.9	172.0
LCS PRIME[1)]	58.3	62.3	-	-	59.7	62.4	-	-	14.0	13.2	-	-	28.7	171.2
NS PRESSER CLP[1)]	65.5	**67.0**	-	-	56.9	59.2	-	-	14.2	13.3	-	-	29.5	174.4
SY ROCKFORD[1)]	54.6	63.5	-	-	57.0	59.4	-	-	14.5	14.1	-	-	27.6	175.7

1) two year's data ('16-'17), 2) three year's data ('15-'17)

2014-2017 ADVANCED SPRING WHEAT NURSERY, HAVRE : District 5

VARIETY	YIELD (BU/AC)				TEST WEIGHT (LB/BU)				PROTEIN (%)				PLANT HEIGHT (IN)	HEADING DATE (JULIAN)
	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2016-2017	
BRENNAN	24.7	31.6	36.5	37.7	59.1	59.5	**58.5**	**59.3**	16.4	16.4	16.4	16.4	23.3	**169.2**
CHOTEAU	26.4	31.6	34.2	35.7	57.8	58.0	56.2	56.8	16.4	16.1	16.3	16.3	24.1	171.9
CORBIN	24.2	35.0	37.4	37.8	59.0	58.8	57.0	57.6	16.3	15.7	16.2	16.3	25.2	169.8
DUCLAIR	26.4	32.5	36.1	38.8	57.2	57.4	55.7	56.3	16.4	15.9	16.3	16.1	24.2	171.0
EGAN	29.4	38.0	38.3	38.2	56.1	56.6	55.5	55.9	**17.0**	**17.2**	**17.5**	**17.5**	25.3	172.3
FORTUNA	27.3	31.9	32.6	33.8	57.9	58.5	57.2	57.6	15.6	15.8	15.9	15.8	30.2	172.3
LANNING	27.7	36.7	39.2	40.5	58.3	58.2	56.5	57.1	16.9	16.5	16.5	16.4	23.5	170.9
LCS PRO	27.0	38.0	39.8	39.8	60.4	59.8	57.1	57.3	16.2	15.7	16.0	16.0	27.6	171.5
MCNEAL	32.7	36.0	38.4	39.2	57.1	56.4	55.8	56.0	15.9	15.7	16.1	16.0	27.4	172.7
REEDER	29.8	37.3	38.9	40.6	58.4	58.3	57.0	57.4	16.0	15.6	16.1	16.1	26.0	172.7
SY INGMAR	30.5	35.9	38.5	40.1	59.6	58.9	57.2	58.1	16.3	16.1	16.4	16.2	25.0	172.1
SY SOREN	30.6	36.4	39.0	39.9	58.9	58.7	56.8	57.5	16.5	16.2	16.6	16.5	24.2	171.6
SY TYRA	30.8	31.8	35.1	37.9	60.5	58.2	56.6	57.8	15.4	15.9	16.0	15.8	23.8	172.4
THATCHER	27.6	30.0	29.7	30.5	55.8	55.7	53.8	54.1	15.8	15.9	16.7	16.6	**31.5**	174.7
VIDA	**36.2**	**38.4**	**40.9**	**42.6**	58.7	57.6	56.3	56.9	15.5	15.6	15.9	15.7	25.4	173.3
WB 9879CLP	28.8	36.2	36.8	37.7	58.2	58.0	56.6	57.1	16.2	16.0	16.2	16.3	25.3	172.5
WB GUNNISON	26.8	30.4	33.5	36.0	58.6	57.7	57.2	57.4	15.1	15.1	15.6	15.5	23.2	171.2
SY VALDA[2)]	28.0	33.2	36.3	-	60.0	59.3	57.8	-	16.2	15.5	16.2	-	23.9	171.9
HRS 3504[1)]	27.1	34.7	-	-	59.4	58.0	-	-	15.8	15.3	-	-	23.6	172.8
HRS 3530[1)]	27.6	31.3	-	-	58.5	56.8	-	-	16.6	16.4	-	-	28.0	173.7
HRS 3616[1)]	25.9	33.9	-	-	59.3	58.3	-	-	16.6	16.6	-	-	24.8	170.8
LCS PRIME[1)]	29.3	35.8	-	-	**61.3**	**60.2**	-	-	15.0	14.5	-	-	27.3	170.6
NS PRESSER CLP[1)]	35.3	35.3	-	-	58.6	56.2	-	-	15.3	15.4	-	-	25.1	173.9
SY ROCKFORD[1)]	31.2	36.3	-	-	57.8	57.0	-	-	15.9	15.7	-	-	26.0	172.8

1) two year's data ('16-'17), 2) three year's data ('15-'17)

2014-2017 ADVANCED SPRING WHEAT NURSERY, SIDNEY (Dry) : District 6

VARIETY	YIELD (BU/AC)				TEST WEIGHT (LB/BU)				PROTEIN (%)				PLANT HEIGHT (IN)	HEADING DATE (JULIAN)
	2017	2016-2017	2015[1]-2017	2014-2017	2017	2016-2017	2015[1]-2017	2014-2017	2017	2016-2017	2015[1]-2017	2014-2017	2016-2017	
BRENNAN	25.7	35.1	35.1	39.7	63.5	63.7	63.7	63.0	14.8	14.2	14.2	13.5	24.6	164.4
CHOTEAU	19.3	32.8	32.8	34.9	60.6	61.6	61.6	61.2	14.1	13.3	13.3	12.9	25.4	166.2
CORBIN	23.5	33.4	33.4	32.6	62.3	62.8	62.8	62.2	14.1	13.1	13.1	12.6	24.7	**164.0**
DUCLAIR	20.2	32.9	32.9	37.0	60.3	61.5	61.5	61.0	14.3	13.2	13.2	12.6	26.2	164.7
EGAN	25.6	31.5	31.5	32.2	57.8	59.9	59.9	60.1	**15.3**	**14.6**	**14.6**	**13.9**	26.5	166.4
FORTUNA	24.7	31.8	31.8	35.4	61.3	62.0	62.0	61.7	14.4	13.9	13.9	13.3	30.5	166.0
LANNING	27.1	35.3	35.3	40.7	61.8	62.7	62.7	62.3	14.4	13.1	13.1	12.4	24.6	164.2
LCS PRO	24.5	34.2	34.2	31.5	62.5	63.1	63.1	62.1	14.4	13.0	13.0	12.5	28.6	165.2
MCNEAL	21.8	33.2	33.2	36.4	59.2	60.5	60.5	60.3	14.1	13.8	13.8	13.0	26.0	167.3
REEDER	26.8	38.8	**38.8**	41.2	62.2	62.8	62.8	62.7	14.1	13.5	13.5	12.7	27.2	165.7
SY INGMAR	26.7	35.4	35.4	38.6	62.2	63.1	63.1	62.5	14.2	13.6	13.6	13.1	25.5	165.2
SY SOREN	29.7	35.7	35.7	39.3	62.6	63.2	63.2	62.3	14.5	13.6	13.6	13.0	23.5	165.0
SY TYRA	25.6	35.7	35.7	37.8	**64.1**	**64.0**	**64.0**	**63.3**	13.5	12.7	12.7	12.0	25.1	165.9
THATCHER	15.9	25.5	25.5	28.1	56.9	59.1	59.1	59.0	14.6	14.0	14.0	13.3	**31.7**	170.0
VIDA	30.8	38.0	38.0	**41.9**	62.0	61.5	61.5	61.3	12.7	13.2	13.2	12.3	25.2	165.8
WB 9879CLP	24.6	32.2	32.2	32.3	61.7	62.6	62.6	61.9	14.3	13.1	13.1	13.0	24.1	166.0
WB GUNNISON	24.2	30.3	30.3	29.6	62.5	63.2	63.2	62.4	13.6	12.8	12.8	12.4	24.9	165.0
SY VALDA[3]	23.1	34.8	34.8	-	62.5	62.9	62.9	-	14.1	13.1	13.1	-	24.8	165.0
HRS 3504[2]	24.9	38.1	-	-	63.2	62.7	-	-	13.9	13.3	-	-	24.1	165.7
HRS 3530[2]	15.2	29.9	-	-	59.4	61.0	-	-	14.5	13.5	-	-	26.6	166.9
HRS 3616[2]	**31.6**	**39.1**	-	-	63.0	62.8	-	-	14.4	13.8	-	-	25.7	165.2
LCS PRIME[2]	17.0	30.2	-	-	63.8	63.6	-	-	12.6	12.3	-	-	25.8	164.0
NS PRESSER CLP[2]	30.8	39.0	-	-	61.0	61.3	-	-	12.7	12.7	-	-	26.2	167.9
SY ROCKFORD[2]	29.2	38.4	-	-	61.3	61.6	-	-	13.9	12.9	-	-	25.0	166.7

1) No planting in 2015, 2) two year's data ('16-'17), 3) three year's data ('15-'17)

2014-2017 ADVANCED SPRING WHEAT NURSERY, SIDNEY (Irrigated) : District 6

VARIETY	YIELD (BU/AC)				TEST WEIGHT (LB/BU)				PROTEIN (%)				PLANT HEIGHT (IN)	HEADING DATE (JULIAN)
	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2017	2016-2017	2015-2017	2014-2017	2016-2017	
BRENNAN	89.8	77.9	69.4	77.1	62.7	61.9	62.2	61.7	12.8	14.0	14.0	14.2	31.6	**166.9**
CHOTEAU	90.5	80.9	73.8	80.7	62.5	61.2	61.2	60.6	11.7	13.2	13.7	13.9	34.8	168.5
CORBIN	100.0	79.9	73.5	79.2	63.8	62.1	62.2	61.5	13.3	14.0	14.1	14.2	35.0	**166.9**
DUCLAIR	95.6	83.2	76.6	85.0	62.2	61.3	61.3	60.7	11.8	13.1	13.5	13.6	36.5	167.0
EGAN	86.9	76.4	68.4	76.6	62.3	60.8	60.8	60.1	**13.4**	**14.8**	**15.1**	**15.3**	35.0	169.4
FORTUNA	83.1	68.1	61.0	66.2	63.0	61.4	61.5	60.7	13.1	13.9	14.2	14.4	39.2	169.5
LANNING	96.9	84.4	70.2	82.3	63.0	61.7	61.7	61.1	12.4	14.2	14.8	14.9	34.2	167.1
LCS PRO	81.3	74.3	65.9	77.3	63.3	62.8	62.7	62.1	11.9	13.4	13.5	13.8	36.8	167.4
MCNEAL	95.1	80.7	75.0	80.7	62.6	61.3	61.4	60.8	12.4	13.4	13.6	13.8	36.8	169.8
REEDER	97.5	84.1	73.1	83.2	63.7	62.6	62.7	62.0	13.3	14.3	14.8	14.7	37.2	168.1
SY INGMAR	90.8	80.3	69.3	78.3	**64.3**	62.9	**63.1**	**62.5**	12.4	13.5	14.3	14.4	34.1	169.1
SY SOREN	101.3	87.1	73.0	81.5	63.5	62.4	62.6	62.1	13.2	13.9	14.4	14.5	31.7	168.0
SY TYRA	**106.0**	**89.0**	**77.1**	**84.1**	**64.3**	62.2	62.5	61.7	10.7	12.0	12.3	12.6	32.7	168.4
THATCHER	78.5	64.6	55.8	59.7	61.8	60.3	60.5	59.9	12.4	13.7	14.4	14.5	**42.0**	171.1
VIDA	102.1	81.0	70.6	79.0	62.8	60.7	60.7	60.1	11.3	13.3	14.0	14.1	35.4	169.1
WB 9879CLP	94.2	81.3	73.7	81.4	62.7	61.5	61.7	61.1	12.1	13.3	13.6	13.9	35.9	169.3
WB GUNNISON	80.8	70.7	69.1	77.8	64.2	62.9	63.0	62.1	11.6	12.7	13.0	13.2	30.8	168.6
SY VALDA[2)]	95.6	86.9	76.7	-	63.1	62.4	62.7	-	10.9	12.4	13.3	-	33.9	168.2
HRS 3504[1)]	102.7	87.8	-	-	62.6	60.9	-	-	11.3	12.7	-	-	33.4	169.4
HRS 3530[1)]	92.2	84.0	-	-	63.3	62.8	-	-	11.9	13.3	-	-	37.7	169.9
HRS 3616[1)]	94.4	82.6	-	-	62.4	61.2	-	-	12.3	13.7	-	-	35.0	167.9
LCS PRIME[1)]	94.6	85.3	-	-	63.6	**63.1**	-	-	10.2	11.9	-	-	35.5	167.1
NS PRESSER CLP[1)]	105.2	79.4	-	-	62.4	59.3	-	-	11.7	13.5	-	-	37.2	171.1
SY ROCKFORD[1)]	101.8	84.5	-	-	61.9	59.7	-	-	12.0	13.2	-	-	35.0	170.7

1) two year's data ('16-'17), 2) three year's data ('15-'17)

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