

2017 Varietal Recommendation

LCS Prime

A motion that "LCS Prime" hard red spring wheat from Limagrain Cereal Seeds be recommended dryland and irrigated production for all districts in the state of Montana.

LCS Prime is a hollow stemmed, hard red spring wheat variety developed by Limagrain Cereal Seeds and released to our dealer network in 2016. PVPA certificate No. 201600159 is pending issue. LCS Prime was derived from a cross of Brick /Faller and tested under the experimental code LNR12-0311. LCS Prime is a medium tall semi-dwarf with above average straw strength. (*Markedly superior to either parent Brick or Faller*). It is only 0.3 inches taller than Vida and it is medium in maturity averaging 1.7 days earlier to head than Vida. LCS Prime has excellent test weight patterns, averaging approximately 1.7 Lb/Bu greater than Vida. LCS Prime has historically shown good resistance to Fusarium Head Blight, (*carries the Fhb-1 gene*). Resistance to Bacterial Leaf Streak, Leaf and Stem Rusts, Septoria Leaf Spot and Tan Spot have all historically been in the intermediate category.

LCS Prime was entered in the 2015 Spring Wheat Quality Advisory Council evaluations and received overall satisfactory scores. In our internal milling and baking LCS Prime is consistently among the top performing lines for end-use quality.

LCS Prime has shown excellent adaptation across the western portions of the HRSW growing area, including western North Dakota and Montana. In 22 location years of testing (*see table 1. below*) in official MSU trials from 2014 thru 2016, LCS Prime averaged 64.0 Bu/ac or 99% yield of Vida. In those same trials, LCS Prime averaged 0.6% lower grain protein than Vida. Closer examination of the MSU data suggests that LCS Prime is exceptionally well adapted across the entire State of Montana, with the possible exception of dryland trials in Havre (Zone 5) where it did not perform quite as well on average as it did over the entire State in two out of three years. Conversely, the 3 year data from Conrad the other dryland site in (Zone 5) and Moccasin (Zone 4) show that LCS Prime has been very competitive in those conditions, so at this point we would request recommendation for all districts. Limited data is available from Irrigated sites (2014-2016 Sidney Irrigated); but there LCS Prime significantly out-performed Vida by a 3 year average of 10.3 Bu/acre (114.7%). It also has yields essentially equal to Vida over the same 3 year period in Kalispell (Zone 1) demonstrating that LCS Prime has very good to excellent yield potential under higher yielding conditions. However, given the plant height, even with its above average straw strength, LCS Prime would, like other taller varieties, benefit from an application of PGR in higher yield or irrigated production zones.

Yield

	State Wide Mean		Zone 1 Mean		Zone 2 Mean		Zone 4 Mean		Zone 5 Mean		Zone 6 Mean	
	bu/ac	% Mean	bu/ac	% Mean	bu/ac	% Mean	bu/ac	% Mean	bu/ac	% Mean	bu/ac	% Mean
BRENNAN	57.9	95.5%	88.6	88.4%	47.8	89.1%	46.7	102.3%	53.4	96.8%	62.4	99.4%
CORBIN	60.3	99.3%	103.8	103.6%	53.3	99.2%	44.3	97.0%	57.1	103.3%	58.2	92.8%
DUCLAIR	63.0	103.8%	106.4	106.1%	52.5	97.9%	48.3	105.8%	55.5	100.5%	67.0	106.8%
FORTUNA	50.2	82.7%	90.9	90.7%	44.4	82.8%	34.9	76.5%	46.5	84.2%	48.8	77.7%
LCS Prime	64.0	105.5%	110.0	109.8%	56.3	104.9%	46.2	101.3%	58.0	105.0%	66.1	105.3%
LCS Pro	63.7	105.0%	118.8	118.5%	58.1	108.3%	45.0	98.6%	58.0	105.0%	59.6	94.9%
MCNEAL	60.7	100.0%	102.7	102.5%	51.8	96.4%	45.5	99.7%	54.9	99.3%	63.0	100.3%
SY SOREN	59.8	98.6%	99.4	99.2%	53.7	100.0%	43.1	94.5%	54.8	99.2%	62.5	99.7%
SY TYRA	59.9	98.8%	97.9	97.7%	53.5	99.8%	41.8	91.6%	56.1	101.7%	63.7	101.4%
THATCHER	51.4	84.8%	89.0	88.8%	50.3	93.8%	38.0	83.3%	45.9	83.2%	49.6	79.0%
VIDA	64.4	106.1%	110.2	109.9%	62.5	116.4%	46.3	101.5%	59.6	108.0%	61.7	98.3%
WB GUNNISON	60.5	99.7%	108.4	108.2%	53.6	100.0%	44.9	98.5%	54.1	98.0%	59.0	94.0%
Trial Averages	60.7		100.2		53.7		45.6		55.2		62.8	

	Zone 1 Mean		KALISPELL - Crop Zone 1							
	3 Year		2016		2015		2014			
	bu/ac	% Mean	bu/ac	% Mean	bu/ac	% Mean	bu/ac	% Mean	bu/ac	% Mean
BRENNAN	88.6	88.4%	69.4	84.1%	102.4	92.3%	94.0	87.7%		
CORBIN	103.8	103.6%	80.8	97.9%	114.8	103.5%	115.8	108.0%		
DUCLAIR	106.4	106.1%	90.7	109.9%	122.0	109.9%	106.5	99.3%		
FORTUNA	90.9	90.7%	89.4	108.4%	95.4	86.0%	87.9	82.0%		
LCS Prime	110.0	109.8%	101.8	123.4%	114.0	102.7%	114.3	106.6%		
LCS Pro	118.8	118.5%	100.3	121.6%	125.3	112.9%	130.8	122.0%		
MCNEAL	102.7	102.5%	86.5	104.8%	99.7	89.8%	121.9	113.7%		
SY SOREN	99.4	99.2%	75.3	91.3%	112.3	101.2%	110.7	103.3%		
SY TYRA	97.9	97.7%	85.6	103.8%	106.4	95.8%	101.7	94.9%		
THATCHER	89.0	88.8%	75.6	91.6%	93.9	84.6%	97.5	91.0%		
VIDA	110.2	109.9%	96.2	116.6%	123.5	111.3%	110.8	103.4%		
WB GUNNISON	108.4	108.2%	96.7	117.3%	112.4	101.3%	116.1	108.3%		
Trial Averages	100.2		82.5		111.0		107.2			

Zone 2 Mean

3 Year

bu/ac % Mean

BRENNAN	47.8	89.1%
CORBIN	53.3	99.2%
DUCLAIR	52.5	97.9%
FORTUNA	44.4	82.8%
LCS Prime	56.3	104.9%
LCS Pro	58.1	108.3%
MCNEAL	51.8	96.4%
SY SOREN	53.7	100.0%
SY TYRA	53.5	99.8%
THATCHER	50.3	93.8%
VIDA	62.5	116.4%
WB GUNNISON	53.6	100.0%

Trial Averages

53.7

BOZEMAN - Crop Zone 2

2016

2015

2014

2016		2015		2014	
bu/ac	% Mean	bu/ac	% Mean	bu/ac	% Mean
43.5	87.7%	29.0	80.4%	71.0	94.2%
52.7	106.3%	37.8	104.9%	69.3	91.9%
46.5	93.8%	37.7	104.7%	73.4	97.3%
47.4	95.6%	38.0	105.7%	47.8	63.4%
55.0	110.8%	38.6	107.3%	75.3	99.9%
52.6	106.0%	41.9	116.3%	79.9	106.0%
49.8	100.3%	32.8	91.1%	72.7	96.4%
49.9	100.5%	35.1	97.6%	76.0	100.8%
46.8	94.4%	35.3	98.2%	78.5	104.1%
41.8	84.3%	37.3	103.6%	71.9	95.4%
61.0	123.1%	39.9	111.0%	86.5	114.7%
49.3	99.4%	38.9	108.1%	72.7	96.4%

49.6

36.0

75.4

Zone 4 Mean

3 Year

bu/ac % Mean

BRENNAN	46.7	102.3%
CORBIN	44.3	97.0%
DUCLAIR	48.3	105.8%
FORTUNA	34.9	76.5%
LCS Prime	46.2	101.3%
LCS Pro	45.0	98.6%
MCNEAL	45.5	99.7%
SY SOREN	43.1	94.5%
SY TYRA	41.8	91.6%
THATCHER	38.0	83.3%
VIDA	46.3	101.5%
WB GUNNISON	44.9	98.5%

Trial Averages

45.6

HUNTLEY - Crop Zone 4

2016

2014

2016		2014	
bu/ac	% Mean	bu/ac	% Mean
84.9	98.6%	46.7	113.3%
87.5	101.6%	44.1	107.0%
98.1	113.9%	44.6	108.3%
60.1	69.8%	29.1	70.6%
93.4	108.5%	39.1	94.9%
75.5	87.7%	53.1	128.9%
84.2	97.8%	39.6	96.1%
83.0	96.4%	38.1	92.5%
81.7	94.9%	32.5	78.9%
54.0	62.7%	42.1	102.2%
89.0	103.4%	44.2	107.3%
86.8	100.8%	40.0	97.1%

86.1

41.2

MOCCASIN - Crop Zone 4

2016

2015

2014

2016		2015		2014	
bu/ac	% Mean	bu/ac	% Mean	bu/ac	% Mean
32.9	100.2%	26.1	90.6%	42.7	108.9%
28.6	87.1%	25.5	88.5%	35.7	91.1%
31.9	97.2%	30.9	107.3%	35.8	91.3%
25.6	78.0%	28.5	99.0%	31.3	79.8%
39.7	121.1%	25.5	88.5%	33.4	85.2%
34.5	105.1%	29.4	102.1%	32.4	82.7%
32.4	98.8%	29.5	102.4%	41.8	106.6%
30.1	91.8%	23.5	81.6%	40.8	104.1%
33.3	101.4%	23.3	80.9%	38.1	97.2%
31.4	95.7%	23.4	81.3%	39.2	100.0%
32.7	99.6%	29.9	103.8%	35.8	91.3%
31.1	94.7%	29.5	102.4%	37.3	95.2%

32.8

28.8

39.2

Zone 5 Mean

3 Year

bu/ac % Mean

BRENNAN	53.4	96.8%
CORBIN	57.1	103.3%
DUCLAIR	55.5	100.5%
FORTUNA	46.5	84.2%
LCS Prime	58.0	105.0%
LCS Pro	58.0	105.0%
MCNEAL	54.9	99.3%
SY SOREN	54.8	99.2%
SY TYRA	56.1	101.7%
THATCHER	45.9	83.2%
VIDA	59.6	108.0%
WB GUNNISON	54.1	98.0%

Trial Averages

55.2

CONRAD - Crop Zone 5

2016

2015

2014

bu/ac % Mean

bu/ac % Mean

bu/ac % Mean

64.9	103.3%
65.6	104.4%
60.0	95.6%
61.7	98.2%
66.3	105.6%
60.9	97.0%
54.0	86.0%
56.8	90.5%
59.9	95.3%
49.5	78.8%
73.5	117.0%
66.3	105.6%

50.1	92.9%
51.9	96.3%
49.5	91.8%
49.0	90.9%
60.1	111.5%
54.1	100.4%
58.3	108.2%
50.4	93.5%
65.0	120.6%
46.9	87.0%
56.1	104.1%
51.8	96.1%

79.3	88.8%
98.0	109.7%
94.7	106.0%
64.5	72.2%
106.4	119.1%
100.8	112.9%
92.7	103.8%
92.5	103.6%
91.2	102.1%
80.6	90.3%
94.0	105.3%
89.3	100.0%

62.8

53.9

89.3

HAVRE - Crop Zone 5

2016

2015

2014

bu/ac % Mean

bu/ac % Mean

bu/ac % Mean

38.4	93.5%
45.7	111.3%
38.6	93.9%
36.4	88.6%
42.3	102.8%
49.0	119.1%
39.2	95.5%
42.2	102.8%
32.8	79.8%
32.3	78.6%
40.5	98.5%
34.0	82.8%

46.3	110.0%
42.3	100.5%
43.2	102.6%
34.2	81.2%
36.8	87.4%
43.4	103.1%
43.4	103.1%
44.3	105.2%
41.7	99.0%
29.2	69.4%
45.9	109.0%
39.7	94.3%

41.5	98.6%
38.8	92.2%
46.9	111.4%
33.0	78.4%
35.9	85.3%
39.8	94.5%
41.5	98.6%
42.5	101.0%
46.3	110.0%
37.2	88.4%
47.9	113.8%
43.4	103.1%

41.1

42.1

42.1

Zone 6 Mean

3 Year

bu/ac % Mean

BRENNAN	62.4	99.4%
CORBIN	58.2	92.8%
DUCLAIR	67.0	106.8%
FORTUNA	48.8	77.7%
LCS Prime	66.1	105.3%
LCS Pro	59.6	94.9%
MCNEAL	63.0	100.3%
SY SOREN	62.5	99.7%
SY TYRA	63.7	101.4%
THATCHER	49.6	79.0%
VIDA	61.7	98.3%
WB GUNNISON	59.0	94.0%

Trial Averages

62.8

SIDNEY DRYLAND - Crop Zone 6

2016

2014

bu/ac % Mean

bu/ac % Mean

44.4	99.8%
43.2	97.0%
45.6	102.5%
38.8	87.2%
43.4	97.6%
43.9	98.6%
44.5	100.0%
41.6	93.5%
45.8	103.0%
35.0	78.6%
45.2	101.6%
36.3	81.5%

48.9	118.4%
31.1	75.3%
45.1	109.2%
33.5	81.1%
42.6	103.1%
26.1	63.2%
42.8	103.6%
46.6	112.8%
42.1	101.9%
42.6	103.1%
49.6	120.1%
28.3	68.5%

44.5

41.3

SIDNEY IRRIGATED - Crop Zone 6

2016

2015

2014

bu/ac % Mean

bu/ac % Mean

bu/ac % Mean

66.0	97.0%
59.7	87.8%
70.8	104.2%
53.0	78.0%
76.0	111.8%
67.3	99.0%
66.3	97.5%
72.8	107.1%
71.9	105.7%
50.6	74.4%
59.8	87.9%
60.6	89.1%

52.5	93.4%
60.9	108.4%
63.3	112.6%
47.0	83.6%
51.4	91.5%
49.1	87.4%
63.7	113.3%
45.0	80.1%
53.3	94.8%
38.2	68.0%
49.9	88.8%
65.9	117.3%

100.1	96.4%
96.2	92.7%
110.2	106.2%
71.6	69.0%
117.0	112.7%
111.5	107.4%
97.5	93.9%
106.7	102.8%
105.2	101.3%
81.5	78.5%
104.0	100.2%
103.9	100.1%

68.0

56.2

103.8

Protein

	State Wide Mean		Zone 1 Mean		Zone 2 Mean		Zone 4 Mean		Zone 5 Mean		Zone 6 Mean	
	%	% Mean	%	% Mean	%	% Mean	%	% Mean	%	% Mean	%	% Mean
BRENNAN	15.1	104.2%	15.2	105.3%	16.0	106.2%	15.5	105.3%	15.4	103.6%	13.8	101.6%
CORBIN	14.6	100.9%	14.5	100.5%	14.8	98.2%	15.2	103.1%	14.8	99.8%	13.9	101.9%
DUCLAIR	14.4	99.4%	15.0	104.4%	14.6	96.7%	14.5	98.4%	14.9	100.3%	13.4	98.1%
FORTUNA	14.5	100.2%	15.4	106.9%	14.6	96.9%	14.6	99.0%	14.8	99.7%	13.6	100.0%
LCS Prime	13.7	94.3%	13.4	92.8%	13.7	90.7%	13.9	94.6%	13.8	93.0%	13.5	99.1%
LCS Pro	14.3	98.6%	14.8	103.0%	14.3	94.5%	14.4	98.2%	14.8	99.6%	13.3	97.8%
MCNEAL	14.5	100.2%	14.8	102.5%	15.1	99.8%	15.0	101.8%	14.9	100.6%	13.2	96.8%
SY SOREN	15.2	104.8%	15.5	107.6%	15.8	104.9%	15.7	106.8%	15.3	103.3%	14.0	102.8%
SY TYRA	13.9	95.6%	14.0	97.0%	14.2	94.0%	14.1	96.2%	14.4	96.7%	12.7	93.5%
THATCHER	15.0	103.1%	15.0	104.2%	14.8	98.2%	15.7	106.5%	15.3	103.0%	13.9	102.2%
VIDA	14.3	98.8%	15.0	103.9%	14.8	98.0%	14.3	97.3%	14.5	97.6%	13.5	99.1%
WB GUNNISON	14.0	96.2%	14.1	98.1%	14.2	94.0%	14.2	96.5%	14.3	96.1%	13.1	96.2%
Trial Averages	14.5		14.4		15.1		14.7		14.8		13.6	

	Zone 1 Mean		KALISPELL - Crop Zone 1							
	3 Year		2016		2015		2014			
	%	% Mean	%	% Mean	%	% Mean	%	% Mean		
BRENNAN	15.2	105.3%	14.9	100.7%	15.9	112.0%	14.7	103.5%		
CORBIN	14.5	100.5%	15.3	103.4%	14.8	104.2%	13.3	93.7%		
DUCLAIR	15.0	104.4%	14.9	100.7%	15.9	112.0%	14.3	100.7%		
FORTUNA	15.4	106.9%	15.6	105.4%	16.0	112.7%	14.6	102.8%		
LCS Prime	13.4	92.8%	13.5	91.2%	13.9	97.9%	12.7	89.4%		
LCS Pro	14.8	103.0%	15.1	102.0%	15.7	110.6%	13.7	96.5%		
MCNEAL	14.8	102.5%	15.9	107.4%	15.1	106.3%	13.3	93.7%		
SY SOREN	15.5	107.6%	15.8	106.8%	16.1	113.4%	14.6	102.8%		
SY TYRA	14.0	97.0%	14.1	95.3%	14.3	100.7%	13.5	95.1%		
THATCHER	15.0	104.2%	15.0	101.4%	16.2	114.1%	13.8	97.2%		
VIDA	15.0	103.9%	15.1	102.0%	15.6	109.9%	14.2	100.0%		
WB GUNNISON	14.1	98.1%	13.9	93.9%	15.2	107.0%	13.3	93.7%		
Trial Averages	14.4		14.8		14.2		14.2			

Zone 2 Mean

3 Year
% % Mean

BRENNAN	16.0	106.2%
CORBIN	14.8	98.2%
DUCLAIR	14.6	96.7%
FORTUNA	14.6	96.9%
LCS Prime	13.7	90.7%
LCS Pro	14.3	94.5%
MCNEAL	15.1	99.8%
SY SOREN	15.8	104.9%
SY TYRA	14.2	94.0%
THATCHER	14.8	98.2%
VIDA	14.8	98.0%
WB GUNNISON	14.2	94.0%

Trial Averages

15.1

BOZEMAN - Crop Zone 2

2016 2015 2014
% % Mean % % Mean % % Mean

15.8	106.0%	16.8	110.5%	15.5	102.0%
14.3	96.0%	14.7	96.7%	15.5	102.0%
15.0	100.7%	14.6	96.1%	14.2	93.4%
14.5	97.3%	14.7	96.7%	14.7	96.7%
13.3	89.3%	13.7	90.1%	14.1	92.8%
13.3	89.3%	14.9	98.0%	14.6	96.1%
14.9	100.0%	15.3	100.7%	15.0	98.7%
15.3	102.7%	16.1	105.9%	16.1	105.9%
13.8	92.6%	14.3	94.1%	14.5	95.4%
14.6	98.0%	14.3	94.1%	15.6	102.6%
14.3	96.0%	15.3	100.7%	14.8	97.4%
14.1	94.6%	14.0	92.1%	14.5	95.4%

14.9

15.2

15.2

Zone 4 Mean

3 Year
% % Mean

BRENNAN	15.5	105.3%
CORBIN	15.2	103.1%
DUCLAIR	14.5	98.4%
FORTUNA	14.6	99.0%
LCS Prime	13.9	94.6%
LCS Pro	14.4	98.2%
MCNEAL	15.0	101.8%
SY SOREN	15.7	106.8%
SY TYRA	14.1	96.2%
THATCHER	15.7	106.5%
VIDA	14.3	97.3%
WB GUNNISON	14.2	96.5%

Trial Averages

14.7

HUNTLEY - Crop Zone 4

2016 2014
% % Mean % % Mean

13.0	107.4%	17.9	98.9%
11.3	93.4%	18.2	100.6%
12.0	99.2%	17.9	98.9%
14.0	115.7%	17.2	95.0%
11.1	91.7%	16.7	92.3%
12.6	104.1%	16.2	89.5%
12.6	104.1%	18.2	100.6%
12.8	105.8%	18.2	100.6%
10.9	90.1%	17.1	94.5%
13.8	114.0%	19.0	105.0%
11.6	95.9%	17.6	97.2%
12.6	104.1%	16.9	93.4%

12.1

18.1

MOCCASIN - Crop Zone 4

2016 2015 2014
% % Mean % % Mean % % Mean

12.5	98.4%	17.5	118.2%	16.5	104.4%
13.3	104.7%	16.4	110.8%	16.6	105.1%
11.8	92.9%	14.1	95.3%	16.5	104.4%
12.4	97.6%	14.0	94.6%	15.2	96.2%
11.1	87.4%	14.1	95.3%	16.5	104.4%
11.9	93.7%	15.8	106.8%	15.7	99.4%
12.3	96.9%	15.1	102.0%	16.6	105.1%
13.1	103.1%	18.5	125.0%	15.9	100.6%
11.2	88.2%	16.4	110.8%	15.1	95.6%
12.7	100.0%	16.7	112.8%	16.1	101.9%
12.0	94.5%	15.0	101.4%	15.3	96.8%
12.0	94.5%	14.1	95.3%	15.3	96.8%

12.7

14.8

15.8

Zone 5 Mean

3 Year
% % Mean

BRENNAN	15.4	103.6%
CORBIN	14.8	99.8%
DUCLAIR	14.9	100.3%
FORTUNA	14.8	99.7%
LCS Prime	13.8	93.0%
LCS Pro	14.8	99.6%
MCNEAL	14.9	100.6%
SY SOREN	15.3	103.3%
SY TYRA	14.4	96.7%
THATCHER	15.3	103.0%
VIDA	14.5	97.6%
WB GUNNISON	14.3	96.1%

Trial Averages 14.8

CONRAD - Crop Zone 5

2016 2015 2014
% % Mean % % Mean % % Mean

14.6	108.1%	15.5	102.6%	13.1	107.4%
13.1	97.0%	14.9	98.7%	12.1	99.2%
13.6	100.7%	16.0	106.0%	11.6	95.1%
13.2	97.8%	15.1	100.0%	12.8	104.9%
12.4	91.9%	13.9	92.1%	11.4	93.4%
13.5	100.0%	15.7	104.0%	11.6	95.1%
13.0	96.3%	15.5	102.6%	12.8	104.9%
14.2	105.2%	16.3	107.9%	12.1	99.2%
13.2	97.8%	14.2	94.0%	10.8	88.5%
13.0	96.3%	15.0	99.3%	13.0	106.6%
13.3	98.5%	15.6	103.3%	10.7	87.7%
12.4	91.9%	14.5	96.0%	11.9	97.5%

Trial Averages 13.5 15.1 12.2

HAVRE - Crop Zone 5

2016 2015 2014
% % Mean % % Mean % % Mean

16.3	105.2%	16.6	99.4%	16.1	100.6%
15.0	96.8%	17.3	103.6%	16.4	102.5%
15.4	99.4%	17.0	101.8%	15.7	98.1%
15.9	102.6%	16.2	97.0%	15.5	96.9%
14.0	90.3%	15.9	95.2%	15.2	95.0%
15.1	97.4%	16.7	100.0%	16.0	100.0%
15.4	99.4%	17.0	101.8%	15.8	98.8%
15.9	102.6%	17.3	103.6%	16.1	100.6%
16.3	105.2%	16.4	98.2%	15.2	95.0%
16.0	103.2%	18.2	109.0%	16.5	103.1%
15.6	100.6%	16.6	99.4%	15.1	94.4%
15.0	96.8%	16.6	99.4%	15.1	94.4%

Trial Averages 15.5 16.7 16.0

Zone 6 Mean

3 Year
% % Mean

BRENNAN	13.8	101.6%
CORBIN	13.9	101.9%
DUCLAIR	13.4	98.1%
FORTUNA	13.6	100.0%
LCS Prime	13.5	99.1%
LCS Pro	13.3	97.8%
MCNEAL	13.2	96.8%
SY SOREN	14.0	102.8%
SY TYRA	12.7	93.5%
THATCHER	13.9	102.2%
VIDA	13.5	99.1%
WB GUNNISON	13.1	96.2%

Trial Averages 13.6

SIDNEY DRYLAND - Crop Zone 6

2016 2014
% % Mean % % Mean

13.4	106.3%	12.1	103.4%
12.8	101.6%	11.6	99.1%
12.4	98.4%	11.5	98.3%
12.0	95.2%	12.2	104.3%
13.8	109.5%	11.2	95.7%
12.1	96.0%	11.5	98.3%
11.9	94.4%	11.3	96.6%
13.0	103.2%	11.7	100.0%
12.8	101.6%	10.5	89.7%
12.2	96.8%	11.9	101.7%
12.2	96.8%	10.7	91.5%
11.6	92.1%	11.5	98.3%

Trial Averages 12.6 11.7

SIDNEY IRRIGATED - Crop Zone 6

2016 2015 2014
% % Mean % % Mean % % Mean

14.7	100.0%	14.1	96.6%	14.9	102.8%
15.3	104.1%	15.5	106.2%	14.2	97.9%
14.7	100.0%	14.4	98.6%	13.8	95.2%
14.3	97.3%	14.9	102.1%	14.7	101.4%
16.1	109.5%	12.7	87.0%	13.7	94.5%
14.6	99.3%	13.8	94.5%	14.6	100.7%
14.5	98.6%	13.9	95.2%	14.3	98.6%
15.3	104.1%	15.5	106.2%	14.5	100.0%
14.2	96.6%	12.9	88.4%	13.3	91.7%
14.9	101.4%	15.7	107.5%	14.9	102.8%
14.7	100.0%	15.5	106.2%	14.4	99.3%
14.9	101.4%	13.7	93.8%	13.8	95.2%

Trial Averages 14.7 14.6 14.5

Test Weight

	State Wide Mean		Zone 1 Mean		Zone 2 Mean		Zone 4 Mean		Zone 5 Mean		Zone 6 Mean	
	lb/bu	% Mean	lb/bu	% Mean	lb/bu	% Mean	lb/bu	% Mean	lb/bu	% Mean	lb/bu	% Mean
BRENNAN	61.2	102.3%	61.2	100.6%	61.3	101.8%	60.2	102.6%	61.2	103.8%	61.9	101.5%
CORBIN	60.3	100.8%	61.8	101.5%	61.1	101.4%	58.6	99.8%	59.6	101.1%	61.3	100.6%
DUCLAIR	59.0	98.6%	60.3	98.9%	59.5	98.8%	57.6	98.1%	57.8	98.0%	60.6	99.5%
FORTUNA	60.2	100.7%	61.4	100.9%	61.1	101.5%	59.4	101.2%	59.4	100.8%	60.7	99.6%
LCS Prime	60.9	101.9%	62.6	102.7%	61.2	101.6%	59.1	100.6%	60.4	102.4%	62.2	102.0%
LCS Pro	60.3	100.9%	62.2	102.1%	60.8	100.9%	58.9	100.4%	59.1	100.3%	61.7	101.2%
MCNEAL	59.2	99.0%	60.9	99.9%	59.1	98.1%	58.0	98.8%	58.3	98.9%	60.5	99.1%
SY SOREN	60.2	100.7%	61.8	101.5%	60.5	100.5%	58.7	100.0%	59.2	100.4%	61.8	101.4%
SY TYRA	60.5	101.1%	61.9	101.6%	61.3	101.9%	59.5	101.4%	59.2	100.4%	61.6	101.0%
THATCHER	58.2	97.3%	60.4	99.2%	58.0	96.4%	57.5	97.9%	56.7	96.1%	59.6	97.7%
VIDA	59.2	99.0%	60.8	99.8%	59.8	99.3%	57.9	98.7%	58.6	99.4%	59.9	98.3%
WB GUNNISON	60.4	101.0%	62.1	102.0%	60.2	100.0%	59.1	100.6%	59.6	101.1%	61.8	101.3%
Trial Averages	59.8		60.9		60.2		58.7		59.0		61.0	

	Zone 1 Mean		KALISPELL - Crop Zone 1							
	3 Year		2016		2015		2014			
	lb/bu	% Mean	lb/bu	% Mean	lb/bu	% Mean	lb/bu	% Mean	lb/bu	% Mean
BRENNAN	61.2	100.6%	61.4	100.7%	62.6	101.1%	59.7	99.8%		
CORBIN	61.8	101.5%	61.9	101.5%	62.6	101.1%	61.0	102.0%		
DUCLAIR	60.3	98.9%	60.4	99.0%	60.7	98.1%	59.7	99.8%		
FORTUNA	61.4	100.9%	61.3	100.4%	61.6	99.5%	61.4	102.7%		
LCS Prime	62.6	102.7%	63.0	103.3%	63.3	102.3%	61.4	102.7%		
LCS Pro	62.2	102.1%	62.6	102.6%	62.5	101.0%	61.5	102.8%		
MCNEAL	60.9	99.9%	60.4	99.0%	61.7	99.7%	60.5	101.2%		
SY SOREN	61.8	101.5%	61.8	101.3%	63.1	101.9%	60.6	101.3%		
SY TYRA	61.9	101.6%	62.7	102.7%	63.1	101.9%	59.8	100.0%		
THATCHER	60.4	99.2%	60.8	99.6%	61.2	98.9%	59.3	99.2%		
VIDA	60.8	99.8%	60.9	99.8%	61.6	99.5%	59.9	100.2%		
WB GUNNISON	62.1	102.0%	61.1	100.2%	63.5	102.6%	61.8	103.3%		
Trial Averages	60.9		61.0		61.9		59.8			

Zone 2 Mean**3 Year**

lb/bu % Mean

BRENNAN	61.3	101.8%
CORBIN	61.1	101.4%
DUCLAIR	59.5	98.8%
FORTUNA	61.1	101.5%
LCS Prime	61.2	101.6%
LCS Pro	60.8	100.9%
MCNEAL	59.1	98.1%
SY SOREN	60.5	100.5%
SY TYRA	61.3	101.9%
THATCHER	58.0	96.4%
VIDA	59.8	99.3%
WB GUNNISON	60.2	100.0%

Trial Averages

60.2

BOZEMAN - Crop Zone 2**2016****2015****2014**

2016		2015		2014	
lb/bu	% Mean	lb/bu	% Mean	lb/bu	% Mean
61.0	101.0%	60.6	100.8%	62.3	103.7%
61.7	102.2%	61.6	102.5%	59.9	99.7%
57.7	95.5%	60.0	99.8%	60.8	101.2%
61.5	101.7%	59.8	99.5%	62.1	103.3%
61.9	102.4%	60.9	101.3%	60.8	101.2%
61.9	102.4%	61.5	102.3%	58.9	98.0%
59.1	97.9%	59.4	98.8%	58.7	97.7%
60.0	99.3%	62.7	104.3%	58.8	97.8%
61.6	102.0%	62.0	103.2%	60.4	100.5%
58.3	96.5%	58.8	97.8%	56.9	94.7%
60.6	100.3%	60.7	101.0%	58.1	96.7%
60.2	99.6%	61.8	102.8%	58.7	97.7%

60.4

60.1

60.1

Zone 4 Mean**3 Year**

lb/bu % Mean

BRENNAN	60.2	102.6%
CORBIN	58.6	99.8%
DUCLAIR	57.6	98.1%
FORTUNA	59.4	101.2%
LCS Prime	59.1	100.6%
LCS Pro	58.9	100.4%
MCNEAL	58.0	98.8%
SY SOREN	58.7	100.0%
SY TYRA	59.5	101.4%
THATCHER	57.5	97.9%
VIDA	57.9	98.7%
WB GUNNISON	59.1	100.6%

Trial Averages

58.7

HUNTLEY - Crop Zone 4**2016****2014**

2016		2014	
lb/bu	% Mean	lb/bu	% Mean
63.7	101.6%	53.4	107.2%
63.5	101.3%	49.7	99.8%
62.1	99.0%	50.2	100.8%
62.5	99.7%	52.7	105.8%
63.1	100.6%	51.1	102.6%
62.4	99.5%	51.2	102.8%
62.0	98.9%	49.8	100.0%
63.2	100.8%	50.7	101.8%
63.2	100.8%	49.4	99.2%
62.3	99.4%	49.5	99.4%
61.7	98.4%	48.6	97.6%
62.6	99.8%	51.3	103.0%

62.7

49.8

MOCCASIN - Crop Zone 4**2016****2015****2014**

2016		2015		2014	
lb/bu	% Mean	lb/bu	% Mean	lb/bu	% Mean
63.3	101.4%	59.8	100.3%	61.0	103.4%
62.7	100.4%	59.3	99.5%	57.9	98.1%
61.5	98.6%	58.2	97.7%	56.0	94.9%
61.4	98.3%	60.0	100.7%	60.5	102.5%
63.5	101.7%	60.1	100.8%	57.6	97.6%
63.4	101.5%	60.1	100.8%	57.5	97.5%
61.8	99.0%	58.7	98.5%	57.7	97.8%
61.9	99.2%	58.8	98.7%	59.0	100.0%
64.3	103.0%	61.1	102.5%	59.7	101.2%
58.7	94.0%	58.0	97.3%	58.8	99.7%
62.3	99.8%	58.9	98.8%	58.1	98.5%
62.6	100.3%	60.3	101.2%	58.5	99.2%

62.4

59.6

59.0

Zone 5 Mean**3 Year**

lb/bu % Mean

BRENNAN	61.2	103.8%
CORBIN	59.6	101.1%
DUCLAIR	57.8	98.0%
FORTUNA	59.4	100.8%
LCS Prime	60.4	102.4%
LCS Pro	59.1	100.3%
MCNEAL	58.3	98.9%
SY SOREN	59.2	100.4%
SY TYRA	59.2	100.4%
THATCHER	56.7	96.1%
VIDA	58.6	99.4%
WB GUNNISON	59.6	101.1%

Trial Averages**59.0****CONRAD - Crop Zone 5****2016**

lb/bu % Mean

64.6	102.8%
64.2	102.1%
60.5	96.2%
63.3	100.7%
65.1	103.4%
64.8	103.1%
62.8	99.9%
63.7	101.2%
63.0	100.2%
62.4	99.2%
62.6	99.5%
63.5	101.0%

62.9**2015**

lb/bu % Mean

63.5	105.8%
59.9	99.8%
57.0	95.0%
60.4	100.7%
62.4	104.0%
59.7	99.5%
59.2	98.7%
59.3	98.8%
61.3	102.2%
58.9	98.2%
58.7	97.8%
60.6	101.0%

60.0**2014**

lb/bu % Mean

61.1	101.3%
61.9	102.7%
60.9	101.0%
60.3	100.0%
61.5	102.0%
61.2	101.5%
60.8	100.8%
61.1	101.3%
59.9	99.3%
58.3	96.7%
61.3	101.7%
62.4	103.5%

60.3**HAVRE - Crop Zone 5****2016**

lb/bu % Mean

59.8	103.3%
58.6	101.2%
57.5	99.3%
59.0	102.0%
59.1	102.1%
59.1	102.0%
55.7	96.3%
58.5	101.1%
55.8	96.4%
55.6	96.0%
56.5	97.6%
56.8	98.1%

57.9**2015**

lb/bu % Mean

56.6	105.0%
53.3	98.9%
52.5	97.4%
54.6	101.3%
55.0	102.0%
51.7	95.9%
54.5	101.1%
53.1	98.5%
53.5	99.3%
50.1	92.9%
53.8	99.8%
56.1	104.1%

53.9**2014**

lb/bu % Mean

61.5	104.8%
59.5	101.4%
58.1	99.0%
58.7	100.0%
59.2	100.9%
58.1	99.0%
56.8	96.8%
59.5	101.4%
61.5	104.8%
54.7	93.2%
58.6	99.8%
58.2	99.1%

58.7**Zone 6 Mean****3 Year**

lb/bu % Mean

BRENNAN	61.9	101.5%
CORBIN	61.3	100.6%
DUCLAIR	60.6	99.5%
FORTUNA	60.7	99.6%
LCS Prime	62.2	102.0%
LCS Pro	61.7	101.2%
MCNEAL	60.5	99.1%
SY SOREN	61.8	101.4%
SY TYRA	61.6	101.0%
THATCHER	59.6	97.7%
VIDA	59.9	98.3%
WB GUNNISON	61.8	101.3%

Trial Averages**61.0****SIDNEY DRYLAND - Crop Zone 6****2016**

lb/bu % Mean

63.9	101.4%
63.3	100.5%
62.6	99.4%
62.7	99.6%
63.4	100.7%
63.7	101.2%
61.7	97.9%
63.7	101.2%
63.8	101.3%
61.2	97.2%
60.9	96.7%
63.8	101.3%

63.0**2014**

lb/bu % Mean

61.5	101.3%
61.0	100.5%
60.0	98.8%
61.0	100.5%
61.0	100.5%
60.0	98.8%
60.0	98.8%
60.5	99.7%
62.0	102.1%
59.0	97.2%
61.0	100.5%
61.0	100.5%

60.7**2016**

lb/bu % Mean

61.1	101.2%
60.3	99.8%
60.3	99.9%
59.8	99.0%
62.5	103.4%
62.3	103.2%
60.0	99.3%
61.3	101.5%
60.1	99.4%
58.8	97.4%
58.6	97.1%
61.6	101.9%

60.4**2015**

lb/bu % Mean

62.9	101.6%
62.5	101.0%
61.3	99.0%
61.6	99.5%
63.6	102.7%
62.6	101.1%
61.6	99.5%
63.0	101.8%
63.2	102.1%
61.0	98.5%
60.6	97.9%
63.1	101.9%

61.9**2014**

lb/bu % Mean

60.0	101.9%
59.5	101.0%
59.0	100.2%
58.5	99.3%
60.5	102.7%
60.0	101.9%
59.0	100.2%
60.5	102.7%
59.0	100.2%
58.0	98.5%
58.5	99.3%
59.5	101.0%

58.9

Heading

	State Wide Mean		Zone 1 Mean		Zone 2 Mean		Zone 4 Mean		Zone 5 Mean		Zone 6 Mean	
	julian	% Mean	julian	% Mean	julian	% Mean	julian	% Mean	julian	% Mean	julian	% Mean
BRENNAN	172.3	99.3%	171.6	98.8%	176.4	99.3%	171.1	99.4%	172.3	99.2%	171.5	99.6%
CORBIN	172.9	99.6%	173.2	99.8%	176.8	99.5%	172.0	99.9%	172.6	99.4%	171.5	99.6%
DUCLAIR	172.2	99.3%	172.4	99.3%	175.8	99.0%	170.8	99.3%	172.4	99.2%	171.3	99.5%
FORTUNA	174.2	100.4%	173.8	100.1%	178.5	100.5%	172.7	100.4%	174.7	100.6%	172.6	100.3%
LCS Prime	173.0	99.7%	173.3	99.8%	177.4	99.9%	172.3	100.1%	172.8	99.4%	171.2	99.5%
LCS Pro	173.5	100.0%	173.5	99.9%	177.4	99.8%	172.7	100.3%	173.7	100.0%	171.6	99.7%
MCNEAL	175.1	100.9%	175.1	100.8%	179.4	101.0%	172.9	100.5%	175.9	101.2%	173.5	100.8%
SY SOREN	174.0	100.3%	174.4	100.4%	178.2	100.3%	173.0	100.5%	174.4	100.4%	171.9	99.9%
SY TYRA	174.1	100.3%	174.8	100.7%	178.1	100.3%	172.7	100.3%	174.6	100.5%	172.1	100.0%
THATCHER	177.5	102.3%	177.9	102.5%	182.1	102.5%	174.9	101.6%	177.4	102.1%	177.1	102.9%
VIDA	174.7	100.7%	175.6	101.1%	178.3	100.4%	172.9	100.5%	175.3	100.9%	173.2	100.6%
WB GUNNISON	173.8	100.1%	174.3	100.4%	177.7	100.0%	172.2	100.1%	173.8	100.0%	172.6	100.3%
Trial Averages	173.5		173.7		177.6		172.1		173.8		172.1	

	Zone 1 Mean		KALISPELL - Crop Zone 1							
	3 Year		2016		2015		2014			
	julian	% Mean	julian	% Mean	julian	% Mean	julian	% Mean	julian	% Mean
BRENNAN	171.6	98.8%	170.0	98.7%	168.9	99.1%	176.0	98.7%		
CORBIN	173.2	99.8%	171.3	99.4%	169.4	99.4%	179.0	100.4%		
DUCLAIR	172.4	99.3%	171.7	99.6%	168.6	98.9%	177.0	99.3%		
FORTUNA	173.8	100.1%	170.3	98.9%	171.2	100.5%	180.0	101.0%		
LCS Prime	173.3	99.8%	172.3	100.0%	170.7	100.2%	177.0	99.3%		
LCS Pro	173.5	99.9%	172.3	100.0%	170.3	99.9%	178.0	99.8%		
MCNEAL	175.1	100.8%	170.3	98.9%	173.0	101.5%	182.0	102.1%		
SY SOREN	174.4	100.4%	173.0	100.4%	171.3	100.5%	179.0	100.4%		
SY TYRA	174.8	100.7%	174.0	101.0%	171.4	100.6%	179.0	100.4%		
THATCHER	177.9	102.5%	176.3	102.3%	173.5	101.8%	184.0	103.2%		
VIDA	175.6	101.1%	174.3	101.2%	171.6	100.7%	181.0	101.5%		
WB GUNNISON	174.3	100.4%	172.7	100.2%	171.2	100.5%	179.0	100.4%		
Trial Averages	173.7		172.3		170.4		178.3			

Zone 2 Mean

3 Year

julian % Mean

BRENNAN	176.4	99.3%
CORBIN	176.8	99.5%
DUCLAIR	175.8	99.0%
FORTUNA	178.5	100.5%
LCS Prime	177.4	99.9%
LCS Pro	177.4	99.8%
MCNEAL	179.4	101.0%
SY SOREN	178.2	100.3%
SY TYRA	178.1	100.3%
THATCHER	182.1	102.5%
VIDA	178.3	100.4%
WB GUNNISON	177.7	100.0%

Trial Averages

177.6

BOZEMAN - Crop Zone 2

2016

2015

2014

2016		2015		2014	
julian	% Mean	julian	% Mean	julian	% Mean
176.0	99.4%	176.0	99.6%	177.3	99.0%
176.0	99.4%	175.7	99.4%	178.7	99.8%
175.0	98.8%	174.7	98.9%	177.7	99.2%
178.0	100.5%	176.7	100.0%	180.7	100.9%
177.0	99.9%	176.0	99.6%	179.3	100.1%
175.7	99.2%	176.7	100.0%	179.7	100.3%
178.7	100.9%	177.7	100.6%	181.7	101.5%
177.7	100.3%	177.3	100.3%	179.7	100.3%
178.0	100.5%	178.0	100.7%	178.3	99.6%
180.3	101.8%	179.7	101.7%	186.3	104.0%
178.0	100.5%	177.0	100.2%	180.0	100.5%
176.7	99.8%	176.7	100.0%	179.7	100.3%

177.1

176.7

179.1

Zone 4 Mean

3 Year

julian % Mean

BRENNAN	171.1	99.4%
CORBIN	172.0	99.9%
DUCLAIR	170.8	99.3%
FORTUNA	172.7	100.4%
LCS Prime	172.3	100.1%
LCS Pro	172.7	100.3%
MCNEAL	172.9	100.5%
SY SOREN	173.0	100.5%
SY TYRA	172.7	100.3%
THATCHER	174.9	101.6%
VIDA	172.9	100.5%
WB GUNNISON	172.2	100.1%

Trial Averages

172.1

HUNTLEY - Crop Zone 4

2016

2014

2016		2014	
julian	% Mean	julian	% Mean
157.7	99.2%	170.0	98.6%
157.0	98.8%	174.0	100.9%
157.7	99.2%	170.7	99.0%
158.7	99.9%	174.7	101.3%
158.3	99.6%	174.0	100.9%
158.7	99.9%	174.0	100.9%
159.7	100.5%	174.0	100.9%
160.0	100.7%	173.0	100.3%
159.7	100.5%	174.0	100.9%
162.0	102.0%	177.0	102.6%
159.0	100.1%	173.0	100.3%
158.7	99.9%	173.0	100.3%

158.9

172.5

MOCCASIN - Crop Zone 4

2016

2015

2014

2016		2015		2014	
julian	% Mean	julian	% Mean	julian	% Mean
174.7	99.3%	174.7	99.9%	178.3	100.1%
175.7	99.9%	174.3	99.7%	179.0	100.4%
174.7	99.3%	173.3	99.1%	177.7	99.7%
176.0	100.1%	175.3	100.2%	179.0	100.4%
176.0	100.1%	175.0	100.1%	178.3	100.1%
176.0	100.1%	176.0	100.6%	178.7	100.3%
176.3	100.2%	175.7	100.5%	179.0	100.4%
177.0	100.6%	176.7	101.0%	178.3	100.1%
175.7	99.9%	175.7	100.5%	178.3	100.1%
177.3	100.8%	177.0	101.2%	181.0	101.6%
176.7	100.4%	176.7	101.0%	179.0	100.4%
175.3	99.7%	175.3	100.2%	178.7	100.3%

175.9

174.9

178.2

Zone 5 Mean**3 Year**

julian % Mean

BRENNAN	172.3	99.2%
CORBIN	172.6	99.4%
DUCLAIR	172.4	99.2%
FORTUNA	174.7	100.6%
LCS Prime	172.8	99.4%
LCS Pro	173.7	100.0%
MCNEAL	175.9	101.2%
SY SOREN	174.4	100.4%
SY TYRA	174.6	100.5%
THATCHER	177.4	102.1%
VIDA	175.3	100.9%
WB GUNNISON	173.8	100.0%

Trial Averages 173.8

CONRAD - Crop Zone 5**2016**

julian % Mean

172.0	99.5%
171.7	99.3%
169.7	98.1%
174.3	100.8%
172.0	99.5%
173.3	100.3%
175.0	101.2%
174.7	101.0%
175.3	101.4%
176.3	102.0%
175.0	101.2%
171.7	99.3%

172.9

2015

julian % Mean

167.7	99.0%
167.7	99.0%
167.3	98.8%
170.7	100.8%
168.0	99.2%
169.3	99.9%
175.3	103.5%
170.3	100.5%
170.7	100.8%
174.3	102.9%
171.0	100.9%
169.0	99.8%

169.4

2014

julian % Mean

180.7	99.3%
181.7	99.9%
181.0	99.5%
183.3	100.8%
181.0	99.5%
182.3	100.2%
182.7	100.4%
182.3	100.2%
181.7	99.9%
185.0	101.7%
182.7	100.4%
182.7	100.4%

181.9

HAVRE - Crop Zone 5**2016**

julian % Mean

179.0	99.0%
179.7	99.4%
181.0	100.1%
181.3	100.3%
180.0	99.6%
180.3	99.7%
181.7	100.5%
181.3	100.3%
181.3	100.3%
183.3	101.4%
182.3	100.8%
181.3	100.3%

180.8

2015

julian % Mean

161.3	99.0%
161.7	99.3%
161.7	99.3%
163.7	100.5%
162.7	99.9%
162.7	99.9%
164.0	100.7%
163.0	100.1%
163.7	100.5%
166.7	102.3%
164.3	100.9%
163.0	100.1%

162.9

2014

julian % Mean

173.0	99.1%
173.3	99.3%
173.7	99.5%
175.0	100.2%
173.0	99.1%
174.3	99.8%
176.7	101.2%
174.7	100.1%
175.0	100.2%
178.7	102.3%
176.3	101.0%
175.3	100.4%

174.6

Zone 6 Mean**3 Year**

julian % Mean

BRENNAN	171.5	99.6%
CORBIN	171.5	99.6%
DUCLAIR	171.3	99.5%
FORTUNA	172.6	100.3%
LCS Prime	171.2	99.5%
LCS Pro	171.6	99.7%
MCNEAL	173.5	100.8%
SY SOREN	171.9	99.9%
SY TYRA	172.1	100.0%
THATCHER	177.1	102.9%
VIDA	173.2	100.6%
WB GUNNISON	172.6	100.3%

Trial Averages 172.1

SIDNEY DRYLAND - Crop Zone 6**2016**

julian % Mean

165.0	99.7%
165.0	99.7%
165.0	99.7%
165.7	100.1%
165.0	99.7%
165.3	99.9%
165.3	99.9%
165.0	99.7%
172.0	103.9%
165.3	99.9%
165.3	99.9%

165.5

2014

julian % Mean

175.7	100.0%
175.0	99.6%
175.0	99.6%
177.0	100.7%
175.3	99.8%
175.3	99.8%
178.0	101.3%
176.0	100.2%
176.0	100.2%
180.7	102.8%
177.0	100.7%
176.7	100.6%

175.7

2016

julian % Mean

169.0	99.5%
169.3	99.7%
169.0	99.5%
170.7	100.5%
169.0	99.5%
169.0	99.5%
170.7	100.5%
169.7	99.9%
170.0	100.1%
171.7	101.1%
170.7	100.5%
170.0	100.1%

169.8

2015

julian % Mean

170.0	99.2%
170.7	99.6%
170.3	99.4%
171.7	100.2%
170.0	99.2%
171.0	99.8%
173.0	101.0%
170.3	99.4%
171.3	100.0%
175.7	102.6%
173.7	101.4%
172.7	100.8%

171.3

2014

julian % Mean

177.7	99.7%
177.3	99.5%
177.0	99.3%
178.0	99.9%
176.7	99.2%
177.3	99.5%
180.7	101.4%
178.3	100.1%
178.3	100.1%
185.3	104.0%
179.3	100.6%
178.3	100.1%

178.2

Height

	State Wide Mean		Zone 1 Mean		Zone 2 Mean		Zone 4 Mean		Zone 5 Mean		Zone 6 Mean	
	inch	% Mean	inch	% Mean	inch	% Mean	inch	% Mean	inch	% Mean	inch	% Mean
BRENNAN	29.1	94.3%	30.9	89.0%	27.3	95.5%	29.8	97.1%	27.5	94.5%	30.4	94.4%
CORBIN	31.1	100.6%	35.8	102.9%	29.4	102.7%	31.1	101.2%	29.2	100.1%	31.6	98.0%
DUCLAIR	31.4	101.8%	35.1	101.1%	29.6	103.5%	31.8	103.5%	29.0	99.4%	33.0	102.3%
FORTUNA	37.1	120.0%	43.8	126.2%	35.5	124.0%	37.7	123.0%	33.9	116.2%	37.1	115.2%
LCS Prime	31.6	102.3%	35.6	102.6%	27.7	96.8%	32.4	105.6%	29.8	102.2%	32.9	102.2%
LCS Pro	34.1	110.4%	40.1	115.6%	31.9	111.5%	33.5	109.3%	32.2	110.5%	34.6	107.4%
MCNEAL	31.6	102.4%	34.1	98.2%	29.2	102.3%	31.6	103.0%	30.2	103.4%	33.4	103.7%
SY SOREN	28.7	93.0%	32.0	92.0%	26.6	93.1%	29.0	94.4%	27.3	93.7%	29.5	91.6%
SY TYRA	27.9	90.3%	31.3	90.0%	25.1	87.6%	26.9	87.5%	27.0	92.5%	29.7	92.2%
THATCHER	38.2	123.7%	45.9	132.3%	36.1	126.2%	38.3	124.8%	35.1	120.2%	38.5	119.4%
VIDA	31.3	101.2%	35.4	101.9%	29.3	102.6%	30.4	99.0%	29.8	102.2%	32.6	101.1%
WB GUNNISON	29.3	94.9%	34.7	100.0%	26.3	91.9%	28.2	92.0%	28.0	95.9%	30.6	94.8%
Trial Averages	30.9		34.7		28.6		30.7		29.2		32.2	

	Zone 1 Mean		KALISPELL - Crop Zone 1							
	3 Year		2016		2015		2014			
	inch	% Mean	inch	% Mean	inch	% Mean	inch	% Mean	inch	% Mean
BRENNAN	30.9	89.0%	31.2	91.6%	30.8	87.5%	30.7	88.0%		
CORBIN	35.8	102.9%	36.1	105.8%	35.5	100.9%	35.7	102.3%		
DUCLAIR	35.1	101.1%	35.3	103.4%	34.8	98.9%	35.3	101.1%		
FORTUNA	43.8	126.2%	46.5	136.3%	41.7	118.5%	43.3	124.1%		
LCS Prime	35.6	102.6%	34.4	100.8%	37.2	105.7%	35.3	101.1%		
LCS Pro	40.1	115.6%	39.1	114.8%	40.0	113.6%	41.3	118.3%		
MCNEAL	34.1	98.2%	35.2	103.1%	31.5	89.5%	35.7	102.3%		
SY SOREN	32.0	92.0%	31.5	92.4%	31.4	89.2%	33.0	94.6%		
SY TYRA	31.3	90.0%	31.9	93.5%	30.6	86.9%	31.3	89.7%		
THATCHER	45.9	132.3%	43.4	127.4%	45.4	129.0%	49.0	140.4%		
VIDA	35.4	101.9%	33.9	99.3%	36.6	104.0%	35.7	102.3%		
WB GUNNISON	34.7	100.0%	36.1	105.8%	33.8	96.0%	34.3	98.3%		
Trial Averages	34.7		34.1		35.2		34.9			

Zone 2 Mean**3 Year**

inch % Mean

BRENNAN	27.3	95.5%
CORBIN	29.4	102.7%
DUCLAIR	29.6	103.5%
FORTUNA	35.5	124.0%
LCS Prime	27.7	96.8%
LCS Pro	31.9	111.5%
MCNEAL	29.2	102.3%
SY SOREN	26.6	93.1%
SY TYRA	25.1	87.6%
THATCHER	36.1	126.2%
VIDA	29.3	102.6%
WB GUNNISON	26.3	91.9%

Trial Averages

28.6

BOZEMAN - Crop Zone 2**2016****2015****2014**

inch % Mean inch % Mean inch % Mean

2016	2015	2014
inch % Mean	inch % Mean	inch % Mean
25.9 95.4%	24.1 95.3%	32.0 95.8%
28.3 104.4%	25.7 101.6%	34.1 102.1%
27.7 102.1%	26.7 105.5%	34.4 103.0%
32.8 121.2%	32.3 127.7%	41.3 123.7%
29.0 106.9%	20.0 79.1%	34.1 102.1%
30.2 111.4%	28.5 112.6%	37.0 110.8%
28.1 103.8%	26.0 102.8%	33.6 100.6%
24.8 91.5%	24.1 95.3%	31.0 92.8%
23.6 87.0%	21.6 85.4%	30.0 89.8%
35.4 130.5%	29.2 115.4%	43.7 130.8%
28.5 105.3%	25.7 101.6%	33.8 101.2%
25.1 92.7%	22.9 90.5%	30.8 92.2%

27.1

25.3

33.4

Zone 4 Mean**3 Year**

inch % Mean

BRENNAN	29.8	97.1%
CORBIN	31.1	101.2%
DUCLAIR	31.8	103.5%
FORTUNA	37.7	123.0%
LCS Prime	32.4	105.6%
LCS Pro	33.5	109.3%
MCNEAL	31.6	103.0%
SY SOREN	29.0	94.4%
SY TYRA	26.9	87.5%
THATCHER	38.3	124.8%
VIDA	30.4	99.0%
WB GUNNISON	28.2	92.0%

Trial Averages

30.7

HUNTLEY - Crop Zone 4**2016****2014**

inch % Mean inch % Mean

2016	2014
inch % Mean	inch % Mean
33.2 91.7%	32.8 94.0%
36.4 100.6%	35.8 102.6%
37.7 104.1%	35.5 101.7%
46.4 128.2%	45.2 129.5%
38.1 105.2%	36.4 104.3%
38.8 107.2%	39.8 114.0%
37.0 102.2%	35.3 101.1%
33.0 91.2%	32.7 93.7%
31.8 87.8%	29.9 85.7%
47.4 130.9%	45.5 130.4%
37.1 102.5%	35.6 102.0%
32.6 90.1%	32.4 92.8%

36.2

34.9

MOCCASIN - Crop Zone 4**2016****2015****2014**

inch % Mean inch % Mean inch % Mean

2016	2015	2014
inch % Mean	inch % Mean	inch % Mean
24.9 103.0%	26.9 96.8%	31.1 102.6%
24.0 99.0%	27.5 98.9%	31.6 104.3%
25.4 105.0%	29.2 105.0%	31.0 102.3%
24.7 102.2%	35.0 125.9%	37.3 123.1%
26.3 108.5%	29.2 105.0%	32.0 105.6%
27.3 112.8%	29.3 105.4%	32.5 107.3%
24.9 102.8%	30.4 109.4%	30.4 100.3%
22.8 94.1%	26.2 94.2%	30.1 99.3%
23.5 97.0%	23.2 83.5%	25.9 85.5%
29.4 121.5%	33.5 120.5%	35.6 117.5%
24.6 101.7%	26.3 94.6%	28.2 93.1%
22.4 92.4%	26.4 95.0%	27.3 90.1%

24.2

27.8

30.3

Zone 5 Mean

3 Year
inch % Mean

BRENNAN	27.5	94.5%
CORBIN	29.2	100.1%
DUCLAIR	29.0	99.4%
FORTUNA	33.9	116.2%
LCS Prime	29.8	102.2%
LCS Pro	32.2	110.5%
MCNEAL	30.2	103.4%
SY SOREN	27.3	93.7%
SY TYRA	27.0	92.5%
THATCHER	35.1	120.2%
VIDA	29.8	102.2%
WB GUNNISON	28.0	95.9%

Trial Averages 29.2

CONRAD - Crop Zone 5

2016 2015 2014
inch % Mean inch % Mean inch % Mean

2016	2015	2014
inch % Mean	inch % Mean	inch % Mean
27.3 94.3%	29.0 91.5%	28.7 90.0%
29.0 100.0%	30.0 94.6%	32.3 101.3%
29.3 101.1%	30.7 96.8%	32.0 100.3%
31.3 108.0%	36.3 114.5%	41.0 128.5%
29.7 102.3%	32.0 100.9%	32.3 101.3%
29.0 100.0%	35.7 112.6%	36.3 113.8%
29.0 100.0%	32.0 100.9%	33.0 103.4%
29.0 100.0%	28.7 90.5%	29.3 91.8%
27.0 93.1%	27.0 85.2%	28.7 90.0%
29.7 102.3%	37.3 117.7%	43.0 134.8%
31.3 108.0%	29.7 93.7%	34.0 106.6%
30.0 103.4%	28.0 88.3%	33.3 104.4%

Trial Averages 29.0 31.7 31.9

HAVRE - Crop Zone 5

2016 2015 2014
inch % Mean inch % Mean inch % Mean

2016	2015	2014
inch % Mean	inch % Mean	inch % Mean
27.2 98.4%	26.4 90.7%	26.6 103.9%
29.3 106.3%	29.8 102.4%	24.7 96.5%
26.4 95.7%	29.1 100.0%	26.4 103.1%
32.0 115.8%	32.9 113.1%	29.8 116.4%
29.8 108.0%	28.3 97.3%	26.6 103.9%
30.5 110.6%	33.8 116.2%	27.9 109.0%
28.1 101.9%	30.5 104.8%	28.3 110.5%
26.8 97.0%	26.4 90.7%	23.8 93.0%
26.4 95.8%	26.9 92.4%	25.8 100.8%
33.5 121.5%	34.5 118.6%	32.3 126.2%
28.0 101.3%	29.6 101.7%	26.1 102.0%
24.6 89.1%	27.2 93.5%	24.6 96.1%

Trial Averages 27.6 29.1 25.6

Zone 6 Mean

3 Year
inch % Mean

BRENNAN	30.4	94.4%
CORBIN	31.6	98.0%
DUCLAIR	33.0	102.3%
FORTUNA	37.1	115.2%
LCS Prime	32.9	102.2%
LCS Pro	34.6	107.4%
MCNEAL	33.4	103.7%
SY SOREN	29.5	91.6%
SY TYRA	29.7	92.2%
THATCHER	38.5	119.4%
VIDA	32.6	101.1%
WB GUNNISON	30.6	94.8%

Trial Averages 32.2

SIDNEY DRYLAND - Crop Zone 6

2016 2014
inch % Mean inch % Mean

2016	2014
inch % Mean	inch % Mean
28.9 100.2%	29.4 100.0%
26.5 92.1%	28.7 97.6%
29.4 102.1%	30.7 104.4%
36.5 126.6%	36.3 123.5%
28.9 100.3%	31.2 106.1%
31.5 109.3%	31.6 107.5%
28.4 98.5%	30.2 102.7%
26.0 90.3%	26.7 90.8%
28.5 98.8%	26.8 91.2%
35.9 124.8%	36.9 125.5%
28.5 98.8%	30.3 103.1%
28.2 97.9%	27.7 94.2%

Trial Averages 28.8 29.4

SIDNEY IRRIGATED - Crop Zone 6

2016 2015 2014
inch % Mean inch % Mean inch % Mean

2016	2015	2014
inch % Mean	inch % Mean	inch % Mean
32.8 92.0%	28.8 89.7%	32.2 91.7%
36.1 101.0%	32.6 101.6%	34.0 96.9%
36.5 102.1%	32.2 100.3%	36.1 102.8%
34.8 97.4%	35.0 109.0%	43.0 122.5%
36.1 101.1%	32.5 101.2%	36.0 102.6%
36.6 102.5%	34.0 105.9%	39.4 112.3%
38.3 107.4%	32.7 101.9%	37.4 106.6%
32.9 92.3%	29.6 92.2%	32.4 92.3%
34.4 96.4%	28.4 88.5%	30.4 86.6%
39.8 111.5%	36.1 112.5%	43.6 124.2%
36.9 103.3%	32.0 99.7%	35.3 100.6%
31.9 89.4%	30.6 95.3%	34.4 98.0%

Trial Averages 35.7 32.1 35.1

End-use quality of LCS Prime and LCS Pro compared to other popular varieties from 2014 to 2016

Line / Variety	Flour Yield (%)	Flour Protein (% (%, 14% m.b.))	Mixograph Tolerance	Mixing Time (min.)	Bake Mix Time (min.)	Bake Water Absorption (%)	Loaf Volume (cc)
BRENNAN	69.8	13.9	3.9	3.1	5.1	75.8	1092
CORBIN	71.4	13.3	3.4	5.4	12.8	75.5	1091
DUCLAIR	70.7	13.4	4.4	4.6	8.4	75.3	1227
FORTUNA	72.7	13.4	3.1	3.4	6.5	74.5	1129
LCS Prime	73.0	12.4	4.5	6.8	17.6	79.5	1117
LCS Pro	72.0	13.3	4.6	5.8	11.8	80.3	1146
MCNEAL	68.9	13.5	5.2	7.4	13.9	77.8	1230
SY SOREN	69.3	13.8	3.8	3.5	8.1	76.0	1147
SY TYRA	69.7	12.6	4.1	4.4	9.5	75.4	1116
THATCHER	69.9	14.0	4.0	4.2	8.7	75.8	1207
VIDA	72.4	13.4	2.8	3.4	6.5	75.1	1172
WB GUNNISON	68.5	12.6	5.1	8.5	15.3	77.5	1154
Mean	70.7	13.3	4.1	5.0	10.3	76.6	1152
Probability (Line)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD	0.7	0.5	0.7	0.8	2.2	1.4	44