

## 2022 WSU Variety Testing Hard Red Winter Wheat Trial, Almira

,	Variety Name	•	J	2022			•	•	5 Year Average (Bu/A)
Released Varieties									
Scorpio   119									
Battle AX	Released Varieties								
LCS Rocket	Scorpio	119	62.5	10.3	37	166	79	79	
Whistler     109     65.3     10.8     41     164     76       LCS Jet     105     62.8     11.8     34     167     76     76     88       Keldin (1,050,000)     104     64.9     12.4     36     166     76     76     88       WB4510CLP     102     66.4     11.4     40     166     17     72       LCS Helix AX     101     65.4     11.4     38     163     71     72       WB4303     99     63.7     11.8     36     161     68     67     82       Keldin (900,000)     98     64.8     11.8     36     167     76     76     87       Canvas     97     65.8     11.8     38     163     75     68     71       Guardian     96     65.5     11.4     40     165     68     71       WB4311     95     64.9     12.2     36     165     68     71       Keldin (750,000)	Battle AX	115	64.4	12.2	39	163	77		
LCS Jet	LCS Rocket	110	62.0	10.7	34	167			
Keldin (1,050,000)     104     64.9     12.4     36     166       WB4510CLP     102     66.4     11.4     40     166       LCS Helix AX     101     65.4     11.4     38     163       WB4394     100     64.7     11.6     42     166     71     72       WB4303     99     63.7     11.8     36     161     68     67     82       Keldin (900,000)     98     64.8     11.8     36     167     76     76     87       Canvas     97     65.8     11.8     38     163     75     68       Guardian     96     65.5     11.4     40     165     68     71       Keldin (750,000)     85     64.7     12.7     37     166     8     71       Keldin (500,000)     70     64.3     12.9     35     167     76     80       LWH19-5691     114     63.3     10.3     34     166     162     168	Whistler	109	65.3	10.8	41	164	76		
WB4510CLP     102     66.4     11.4     40     166       LCS Helix AX     101     65.4     11.4     38     163       WB4394     100     64.7     11.6     42     166     71     72       WB4303     99     63.7     11.8     36     161     68     67     82       Keldin (900,000)     98     64.8     11.8     36     167     76     76     87       Canvas     97     65.8     11.8     38     163     75     76     87       Guardian     96     65.5     11.4     40     165     68     71     Keldin (750,000)     85     64.9     12.2     36     166     68     71       Keldin (500,000)     70     64.3     12.9     35     167     76     80       LWH19-5691     114     63.3     10.3     34     166     167     76     80       LWH19-5693     113     64.2     10.6     37 <th< td=""><td>LCS Jet</td><td>105</td><td>62.8</td><td>11.8</td><td>34</td><td>167</td><td>76</td><td>76</td><td>88</td></th<>	LCS Jet	105	62.8	11.8	34	167	76	76	88
LCS Helix AX     101     65.4     11.4     38     163       WB4394     100     64.7     11.6     42     166     71     72       WB4303     99     63.7     11.8     36     161     68     67     82       Keldin (900,000)     98     64.8     11.8     36     167     76     76     87       Canvas     97     65.8     11.8     38     163     75     68       Guardian     96     65.5     11.4     40     165     68     71       Keldin (750,000)     85     64.9     12.2     36     165     68     71       Keldin (500,000)     70     64.3     12.9     35     167     72       Experimental Lines       LWH19-5691     114     63.3     10.3     34     166     167     76     80     14     14     14     169     71     14     14     160     37     167     16     16	Keldin (1,050,000)	104	64.9	12.4	36	166			
WB4394     100     64.7     11.6     42     166     71     72       WB4303     99     63.7     11.8     36     161     68     67     82       Keldin (900,000)     98     64.8     11.8     36     167     76     76     87       Canvas     97     65.8     11.8     38     163     75     75       Guardian     96     65.5     11.4     40     165     68     71       WB4311     95     64.9     12.2     36     165     68     71       Keldin (500,000)     85     64.7     12.7     37     166     68     71       Keldin (500,000)     70     64.3     12.9     35     167     76     80       Experimental Lines       LWH19-5661     114     63.3     10.3     34     166     167     76     80       LWH19-10103     113     64.2     10.6     37     167     76     80	WB4510CLP	102	66.4	11.4	40	166			
WB4303     99     63.7     11.8     36     161     68     67     82       Keldin (900,000)     98     64.8     11.8     36     167     76     76     87       Canvas     97     65.8     11.8     38     163     75       Guardian     96     65.5     11.4     40     165     68       WB4311     95     64.9     12.2     36     165     68     71       Keldin (750,000)     85     64.7     12.7     37     166     8     71       Keldin (500,000)     70     64.3     12.9     35     167     76     80       Experimental Lines     LWH9-5691     114     63.3     10.3     34     166     166     168	LCS Helix AX	101	65.4	11.4	38	163			
Keldin (900,000)     98     64.8     11.8     36     167     76     76     87       Canvas     97     65.8     11.8     38     163     75       Guardian     96     65.5     11.4     40     165     68       WB4311     95     64.9     12.2     36     165     68     71       Keldin (750,000)     85     64.7     12.7     37     166     72     74       Keldin (500,000)     70     64.3     12.9     35     167     76     80       Experimental Lines     LWH19-5691     114     63.3     10.3     34     166     14     14     63.3     10.3     34     166     14     14     14     163.3     10.6     37     167     76     80     14     14     163.3     10.6     42     168     44     169     71     71     76     80     14     14     169     71     16     80     14     167	WB4394	100	64.7	11.6	42	166	71	72	
Canvas     97     65.8     11.8     38     163     75       Guardian     96     65.5     11.4     40     165     68       WB4311     95     64.9     12.2     36     165     68     71       Keldin (500,000)     85     64.7     12.7     37     166     72     74       Keldin (500,000)     70     64.3     12.9     35     167     76     76     76     76     76     76     76     76     76     77     78     78     78     78     78     78     78     78     78     78     78     78     78     78     78     78 <th< td=""><td>WB4303</td><td>99</td><td>63.7</td><td>11.8</td><td>36</td><td>161</td><td>68</td><td>67</td><td>82</td></th<>	WB4303	99	63.7	11.8	36	161	68	67	82
Guardian     96     65.5     11.4     40     165     68       WB4311     95     64.9     12.2     36     165     68     71       Keldin (750,000)     85     64.7     12.7     37     166     167     167     167     167     167     167     167     167     167     167     167     167     167     168     166     168     168     168     168     168     168     168     168     168     168     169     169     169     169     169     169     169     169     169     169     169     169	Keldin (900,000)	98	64.8	11.8	36	167	76	76	87
WB4311     95     64.9     12.2     36     165     68     71       Keldin (750,000)     85     64.7     12.7     37     166     Centrol (750,000)     70     64.3     12.9     35     167     Centrol (750,000)     70     64.3     12.9     35     166     65     45     45     466     47     466     47     466     47     466     42     168     47     468     47     468     469     71     468     468     468     469     47     468     469     47     468     469     47     468     469     47     468     468     468     468     468     468     468     468     468     469	Canvas	97	65.8	11.8	38	163	75		
Keldin (750,000)     85     64.7     12.7     37     166       Keldin (500,000)     70     64.3     12.9     35     167       Experimental Lines       LWH19-5691     114     63.3     10.3     34     166       LWH19-1103     113     64.2     10.6     37     167       PN13001002-04     113     63.5     10.6     42     168       WA8338     107     62.4     11.3     44     169     71       LWH19-0192     106     63.4     10.9     34     167     76     80       VSA3310     104     63.7     10.4     40     167     76     80       LWH19-5663     102     63.1     10.9     35     168     71     71     72     80     80     11.1     44     169     71     71     71     71     72     80     80     11.1     44     169     71     71     71     72     74     74     74 <td>Guardian</td> <td>96</td> <td>65.5</td> <td>11.4</td> <td>40</td> <td>165</td> <td>68</td> <td></td> <td></td>	Guardian	96	65.5	11.4	40	165	68		
Keldin (500,000)     70     64.3     12.9     35     167       Experimental Lines     LWH19-5691     114     63.3     10.3     34     166       LWH19-1103     113     64.2     10.6     37     167       PN13001002-04     113     63.5     10.6     42     168       WA8338     107     62.4     11.3     44     169     71       LWH19-0192     106     63.4     10.9     34     167     76       WA8310     104     63.7     10.4     40     167     76     80       LWH19-5663     102     63.1     10.9     35     168     71     76     80       YSC-1001     102     62.6     11.1     44     169     71     76     80       WA8367     98     65.0     11.4     41     170     170     170     170     170     170     170     170     170     170     170     170     170     170 <t< td=""><td>WB4311</td><td>95</td><td>64.9</td><td>12.2</td><td>36</td><td>165</td><td>68</td><td>71</td><td></td></t<>	WB4311	95	64.9	12.2	36	165	68	71	
Experimental Lines     LWH19-5691   114   63.3   10.3   34   166     LWH19-1103   113   64.2   10.6   37   167     PN13001002-04   113   63.5   10.6   42   168     WA8338   107   62.4   11.3   44   169   71     LWH19-0192   106   63.4   10.9   34   167   76   80     WA8310   104   63.7   10.4   40   167   76   80     LWH19-5663   102   63.1   10.9   35   168     YSC-1001   102   62.6   11.1   44   169   71     WA8367   98   65.0   11.4   41   170     LWH18-0122   97   62.8   11.9   32   164   68     YSC-1002   94   64.2   11.6   39   162   66     OR2170199R   90   62.0   11.5   32   169   69     WA8318 CL+   87   63.5   10.5   47   171	Keldin (750,000)	85	64.7	12.7	37	166			
LWH19-5691   114   63.3   10.3   34   166     LWH19-1103   113   64.2   10.6   37   167     PN13001002-04   113   63.5   10.6   42   168     WA8338   107   62.4   11.3   44   169   71     LWH19-0192   106   63.4   10.9   34   167   76   80     WA8310   104   63.7   10.4   40   167   76   80     LWH19-5663   102   63.1   10.9   35   168     YSC-1001   102   62.6   11.1   44   169   71     WA8367   98   65.0   11.4   41   170     LWH18-0122   97   62.8   11.9   32   164   68     YSC-1002   94   64.2   11.6   39   162   66     OR2170199R   90   62.0   11.5   32   169   69     WA8318 CL+   87   63.5   10.5   47   171   66   68     GH	Keldin (500,000)	70	64.3	12.9	35	167			
LWH19-1103	Experimental Lines								
PN13001002-04     113     63.5     10.6     42     168       WA8338     107     62.4     11.3     44     169     71       LWH19-0192     106     63.4     10.9     34     167     76       WA8310     104     63.7     10.4     40     167     76     80       LWH19-5663     102     63.1     10.9     35     168     71     76     80       YSC-1001     102     62.6     11.1     44     169     71     71     72     74     74     74     70     74     74     74     74     74     74     74     76     80	LWH19-5691	114	63.3	10.3	34	166			
WA8338     107     62.4     11.3     44     169     71       LWH19-0192     106     63.4     10.9     34     167     76       WA8310     104     63.7     10.4     40     167     76     80       LWH19-5663     102     63.1     10.9     35     168     71     76     80       YSC-1001     102     62.6     11.1     44     169     71     76     80       WA8367     98     65.0     11.4     41     170     76     80     77     80 <th< td=""><td>LWH19-1103</td><td>113</td><td>64.2</td><td>10.6</td><td>37</td><td>167</td><td></td><td></td><td></td></th<>	LWH19-1103	113	64.2	10.6	37	167			
LWH19-0192   106   63.4   10.9   34   167   76     WA8310   104   63.7   10.4   40   167   76   80     LWH19-5663   102   63.1   10.9   35   168     YSC-1001   102   62.6   11.1   44   169   71     WA8367   98   65.0   11.4   41   170     LWH18-0122   97   62.8   11.9   32   164   68     YSC-1002   94   64.2   11.6   39   162   66     OR2170199R   90   62.0   11.5   32   169   69     WA8318 CL+   87   63.5   10.5   47   171   66   68     GHR10   84   64.4   13.5   41   161   13   13   10     LSD   18   0.7   1.0   3   2   NS   9   NS     Average   101   64.0   11.5   38   166   72   74   86     Highest   119   <	PN13001002-04	113	63.5	10.6	42	168			
WA8310     104     63.7     10.4     40     167     76     80       LWH19-5663     102     63.1     10.9     35     168       YSC-1001     102     62.6     11.1     44     169     71       WA8367     98     65.0     11.4     41     170       LWH18-0122     97     62.8     11.9     32     164     68       YSC-1002     94     64.2     11.6     39     162     66       OR2170199R     90     62.0     11.5     32     169     69       WA8318 CL+     87     63.5     10.5     47     171     66     68       GHR10     84     64.4     13.5     41     161     13     13     10       LSD     18     0.7     1.0     3     2     NS     9     NS       Average     101     64.0     11.5     38     166     72     74     86       Highest     119	WA8338	107	62.4	11.3	44	169	71		
LWH19-5663   102   63.1   10.9   35   168     YSC-1001   102   62.6   11.1   44   169   71     WA8367   98   65.0   11.4   41   170     LWH18-0122   97   62.8   11.9   32   164   68     YSC-1002   94   64.2   11.6   39   162   66     OR2170199R   90   62.0   11.5   32   169   69     WA8318 CL+   87   63.5   10.5   47   171   66   68     GHR10   84   64.4   13.5   41   161   13   13   10     LSD   18   0.7   1.0   3   2   NS   9   NS     Average   101   64.0   11.5   38   166   72   74   86     Highest   119   66.4   13.5   47   171   79   80   88	LWH19-0192	106	63.4	10.9	34	167	76		
YSC-1001     102     62.6     11.1     44     169     71       WA8367     98     65.0     11.4     41     170       LWH18-0122     97     62.8     11.9     32     164     68       YSC-1002     94     64.2     11.6     39     162     66       OR2170199R     90     62.0     11.5     32     169     69       WA8318 CL+     87     63.5     10.5     47     171     66     68       GHR10     84     64.4     13.5     41     161     13     13     10       LSD     18     0.7     1.0     3     2     NS     9     NS       Average     101     64.0     11.5     38     166     72     74     86       Highest     119     66.4     13.5     47     171     79     80     88	WA8310	104	63.7	10.4	40	167	76	80	
WA8367     98     65.0     11.4     41     170       LWH18-0122     97     62.8     11.9     32     164     68       YSC-1002     94     64.2     11.6     39     162     66       OR2170199R     90     62.0     11.5     32     169     69       WA8318 CL+     87     63.5     10.5     47     171     66     68       GHR10     84     64.4     13.5     41     161     13     13     10       LSD     18     0.7     1.0     3     2     NS     9     NS       Average     101     64.0     11.5     38     166     72     74     86       Highest     119     66.4     13.5     47     171     79     80     88	LWH19-5663	102	63.1	10.9	35	168			
LWH18-0122   97   62.8   11.9   32   164   68     YSC-1002   94   64.2   11.6   39   162   66     OR2170199R   90   62.0   11.5   32   169   69     WA8318 CL+   87   63.5   10.5   47   171   66   68     GHR10   84   64.4   13.5   41   161	YSC-1001	102	62.6	11.1	44	169	71		
YSC-1002     94     64.2     11.6     39     162     66       OR2170199R     90     62.0     11.5     32     169     69       WA8318 CL+     87     63.5     10.5     47     171     66     68       GHR10     84     64.4     13.5     41     161     13     13     10       C.V.     8     0.5     4.5     4     1     13     13     10       LSD     18     0.7     1.0     3     2     NS     9     NS       Average     101     64.0     11.5     38     166     72     74     86       Highest     119     66.4     13.5     47     171     79     80     88	WA8367	98	65.0	11.4	41	170			
OR2170199R     90     62.0     11.5     32     169     69       WA8318 CL+     87     63.5     10.5     47     171     66     68       GHR10     84     64.4     13.5     41     161	LWH18-0122	97	62.8	11.9	32	164	68		
WA8318 CL+     87     63.5     10.5     47     171     66     68       GHR10     84     64.4     13.5     41     161	YSC-1002	94	64.2	11.6	39	162	66		
GHR10     84     64.4     13.5     41     161       C.V.     8     0.5     4.5     4     1     13     13     10       LSD     18     0.7     1.0     3     2     NS     9     NS       Average     101     64.0     11.5     38     166     72     74     86       Highest     119     66.4     13.5     47     171     79     80     88	OR2170199R	90	62.0	11.5	32	169	69		
C.V.   8   0.5   4.5   4   1   13   13   10     LSD   18   0.7   1.0   3   2   NS   9   NS     Average   101   64.0   11.5   38   166   72   74   86     Highest   119   66.4   13.5   47   171   79   80   88	WA8318 CL+	87	63.5	10.5	47	171	66	68	
LSD 18 0.7 1.0 3 2 NS 9 NS   Average 101 64.0 11.5 38 166 72 74 86   Highest 119 66.4 13.5 47 171 79 80 88	GHR10	84	64.4	13.5	41	161			
Average     101     64.0     11.5     38     166     72     74     86       Highest     119     66.4     13.5     47     171     79     80     88	C.V.	8	0.5	4.5	4	1	13	13	10
Average     101     64.0     11.5     38     166     72     74     86       Highest     119     66.4     13.5     47     171     79     80     88	LSD	18	0.7	1.0	3	2	NS	9	NS
<b>Highest</b> 119 66.4 13.5 47 171 79 80 88						166		74	
	<del>_</del>	119		13.5	47	171	79	80	88
					32	161	66	67	82

Planting Date:	9/9/2021		
Harvest Date:	8/13/2022		
Seeding Rate (seeds/ft <sup>2</sup> ):	21.5		
Previous Crop:	Fallow		
Spring soil test:			
N (lb/ac) 4-ft sample	256		
P <sub>2</sub> O <sub>5</sub> (lb/ac) 1-ft sample	167		
S (lb/ac) 2-ft sample	27		
pH (top 6 inches)	4.9		

Herbicides: Zidua (4oz) was applied on September 17.

Nexicor (13oz) was applied on June 17.

## **Trial Notes:**

- 1. The nursery was located approximately 6.5 miles southeast of Grand Coulee, Wa.
- 2. The nursery was fertilized at a rate of 40N after seeding by the cooperator. An additional 42N was applied on November 10.
- 3. Overall yield was 135% greater than 2021.

Cooperator: Dan & Mike McKay