## 2009 WSU EXTENSION HARD WINTER WHEAT NURSERY AT REARDAN, WA.

Variety NameAVERAGEAVERAGEAVERAGEYIELDTEST WTPROTEINLODGINGPLANTHEAD*HDWH Italicized(BU/A)(BU/A)(BU/A)(BU/A)(BU/A)(W)(W)HTDATE	Variety Name AV	5 YEAR VERAGE (BU/A)	_	_	2009					
WAOBBOBB						_				
WAOD8068          84         87         61.3         12.3         3         37         164           BOUNDARY          89         88         86         60.6         11.7         0         28         162           WHETSTONE          76         74         82         62.4         12.8         0         31         157           ACS 52025          83         80         82         61.1         11.2         10         30         169           BEULEMEISTER          81         77         80         61.4         11.2         10         32         164           DECLO          77         83         80         62.1         11.2         10         32         164           DECLO          77         83         80         62.1         11.2         0         27         161           WAD08070          78         78         79         61.8         12.7         0         27         161           MLAD08080          75         79         62.0         12.2         0         30         186           <	MDM		89	88	92	61.4	11.1	3	33	165
BOUNDARY     89   88   86   60.6   12.7   0   28   162   MA008097     86   60.6   00.6   11.7   10   35   165   157   MRETSTONE     76   74   82   62.4   12.8   0   31   157   ACS 52025     83   80   82   61.1   12.1   0   30   159   BAUERMEISTER     81   77   80   61.4   11.2   10   32   164   MA008097     76   83   80   62.1   12.8   0   27   161   MA008097     76   80   61.7   11.2   7   38   166   MA008097     78   78   79   61.8   12.7   0   27   161   MINOSTESSS     75   79   62.0   12.2   0   30   158   EDDY     75   74   78   61.4   11.5   7   37   164   MINOSTESSS     75   74   78   61.4   11.5   7   37   164   MINOSTESSS     75   74   78   61.4   11.5   7   37   164   MINOSTESSS     75   74   78   61.4   11.5   7   37   164   MINOSTESSS     77   76   61.6   10.8   13   37   161   ELTAN     79   75   75   60.6   11.2   0   32   165   MINOSTESSS     77   76   61.6   10.8   13   37   161   ELTAN     79   75   72   75   62.8   12.4   3   37   163   ESPERIAN     75   77   76   61.6   10.8   13   37   161   ESPERIA     77   76   77   78   60.5   12.0   0   26   157   MA008092     75   71   74   60.8   12.1   3   34   161   ESPERIA     76   77   72   75   62.8   12.4   3   37   162   162   MA008092     75   71   74   60.8   12.1   10   0   28   162   162   MA008092     76   77   72   59.7   12.2   7   37   162   162   MA008092     75   71   74   60.8   12.1   10   40   162   162   MA008092     76   77   72   59.7   12.2   7   37   162   162   MA008092     76   77   72   59.7   12.2   7   37   162   162   MA008092     76   77   72   59.7   12.2   7   37   162   162   MA008092     76   77   72   59.7   12.2   7   37   162   162   MA008092     76   77   72   59.7   12.2   7   37   162   162   MA008095       76   77   72   59.7   12.2   7   37   162   162   MA008095       76   77   72   59.7   12.9   37   39   164   162   MA008095       76   77   72   59.7   12.9   37   39   164   162   MA008095       76   77   7	WA008098				90	60.7	12.2	27	37	166
WA008097	WA008068			84	87	61.3	12.3	3	37	164
WHETSTONE          76         74         82         62.4         12.8         0         31         157           ACS 52025          83         80         82         61.1         12.1         0         30         159           BAULEMBISTER          81         77         80         61.4         11.2         10         32         164           DECLO          77         83         80         62.1         12.8         0         27         161           MCMO8070          76         80         61.7         11.2         7         38         166           M.9W05-2506          75         74         78         61.2         11.8         0         29         160           MA090905          75         74         78         61.4         11.5         7         37         164           ML20W04-2543W          77         76         61.6         10.8         13         37         161           ELTAN          79         75         75         60.6         11.2         0         32         165	BOUNDARY		89	88	86	60.6	12.7	0	28	162
ACS 52025 83 80 82 61.1 12.1 0 30 159 BAUERMEISTER 81 77 80 61.4 11.2 10 32 164 DECLO 77 83 80 62.1 11.2 0 32 164  DECLO 77 83 80 62.1 11.2 0 32 164  DECLO 78 83 80 62.1 11.2 0 33 166  NORWEST 553 78 78 78 79 61.8 12.7 0 27 161  MA008070 75 79 62.0 12.2 0 30 158  EDDY 75 74 78 61.2 11.8 0 29 160  WA008095 75 74 78 61.4 11.5 7 37 164  WA008096 8 78 61.4 11.5 7 37 164  WA008096 8 78 61.4 11.5 7 37 164  MALWWA2843W 77 61.3 11.7 0 33 159  PERCERINE 79 75 75 62.6 11.2 0 32 166  HATTON 75 72 75 62.6 11.2 0 32 166  HATTON 75 72 75 62.8 12.4 3 37 161  ESPPERIA 77 75 71 74 59.8 10.6 0 32 162  ACCIPITER 73 72 72 62.1 11.8 0 28 163  FINLEY 73 72 72 62.1 11.7 37 37 167  DOGS1 76 77 71 60.8 12.1 10 0 32 166  FARNUM 76 77 72 59.7 12.2 7 37 167  DOGS1 76 77 70 62.3 12.6 0 28 163  FINLEY 73 72 72 62.1 11.7 37 37 167  DOGS1 76 77 71 60.8 12.1 10 0 32 166  FARNUM 76 77 72 59.7 12.2 7 37 167  DOGS1 76 77 72 59.7 12.2 7 37 167  DOGS1 76 77 72 59.7 12.2 7 37 167  DOGS1 76 77 72 59.7 12.2 7 37 167  DOGS1 76 77 72 59.7 12.2 7 37 167  DOGS1 76 77 72 59.7 12.2 7 37 167  DOGS1 76 77 72 59.7 12.2 7 37 167  DOGS1 76 77 72 59.7 12.2 7 37 167  DOGS3 76 77 72 59.7 12.2 7 37 167  DOGS1 76 77 78 66 61.6 13.5 37 39 164  BEODO22 76 74 66 61.6 13.6 0 26 158  WA0080061 64 59 54 62.2 11.9 17 34 159  WA0080061 64 59 54 62.2 11.9 17 34 159  WADDACOTA 64 59 54 62.2 11.9 17 34 159  WADDACOTA 64 59 54 62.2 11.9 17 34 159  WADDACOTA 62 56 52 61.1 13.4 0 26 158  WOLLDAKWIN 64 59 54 62.2 11.9 17 34 159  WAOUE 55 8 12 0.4 0.7 14 3 1 157  PALOWINO 62 56 52 61.1 13.4 0 26 158  WOLLDAKWIN 64 59 54 62.2 11.9 17 34 159  WAUEST 77 75 74 61.3 12.1 6 32 161  Highest 89 88 92 62.8 14.3 37 40 167	WA008097				86	60.6	11.7	10	35	165
BAUERMEISTER	WHETSTONE		76	74	82	62.4	12.8	0	31	157
DECLO          77         83         80         62.1         12.8         0         27         161           WA0000000          76         80         61.7         11.2         7         38         166           ML9W05-2506          78         78         79         61.8         12.7         0         27         161           ML9W05-2506          75         79         62.0         12.2         0         30         158           EDDY          75         74         78         61.2         11.8         0         29         160           WA008056          75         74         78         61.2         11.8         0         29         160           WA008056          75         74         78         61.4         11.5         7         37         164           WA008056          77         76         61.6         10.8         13         37         161           MLPOWSASAWY          79         75         75         60.6         11.2         0         32         165           HATTON	ACS 52025		83	80	82	61.1	12.1	0	30	159
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NORWEST 553	DECLO		77	83	80	62.1	12.8	0	27	161
NORWEST 553	WA008070			76	80	61.7	11.2	7	38	166
EDDY			78	78	79	61.8		0	27	161
WA008095          78         61.4         11.5         7         37         164           WA008090          78         60.4         12.1         0         32         164           ML9W042543W          77         61.3         11.7         0         33         159           PEREGRINE          79         75         75         60.6         11.2         0         32         165           HATTON          75         72         75         62.8         12.4         3         37         163           DO658          75         62.0         11.2         0         32         165           ESPERIA          75         62.0         11.2         3         34         161           ESPERIA          75         60.5         12.0         0         26         157           WA008022          75         71         74         59.8         10.6         0         32         162           FINLEY          73         72         72         59.7         12.2         7         37         167	ML9W05-2506			75	79	62.0	12.2	0	30	158
WA008096          78         60.4         12.1         0         32         164           MLJW042543W          77         61.3         11.7         0         33         159           PEREGRINE          77         76         61.6         10.8         13         37         161           ELTAN          79         75         75         60.6         11.2         0         32         165           HATTON          75         72         75         62.8         12.4         3         37         163           IDO658          75         72         75         62.8         12.4         3         34         161           ESPERIA          75         60.5         12.0         0         26         157           WA008022          75         71         74         59.8         10.6         0         32         162           FARNUM          76         77         72         59.7         11.3         0         28         163           FINCEY          73         77         72         59	EDDY		75	74	78	61.2	11.8	0	29	160
MISW042543W          77         61.3         11.7         0         33         159           PEREGRINE          77         76         61.6         10.8         13         37         161           ELTAN          79         75         75         60.6         11.2         0         32         165           HATTON          75         72         75         62.8         12.4         3         37         163           IDO638          -         75         62.0         11.2         3         34         161           ESPERIA          75         60.5         12.0         0         26         157           WA008022          75         71         74         59.8         10.6         0         32         162           ACCIPITER          73         72         72         62.1         11.7         37         37         162           FARNUM          76         77         72         59.7         12.2         7         37         167           IDO651          71         71         71	WA008095				78	61.4	11.5	7	37	164
ML9W042543W          77         61.3         11.7         0         33         159           PEREGRINE          77         76         61.6         10.8         13         37         161           ELTAN          79         75         75         60.6         11.2         0         32         165           HATTON          75         72         75         62.8         12.4         3         37         163           IDO638           75         62.0         11.2         3         34         161           ESPERIA          75         60.5         12.0         0         26         157           WA008022          75         71         74         59.8         10.6         0         32         162           ACCIPITER          75         71         74         59.8         10.6         0         32         162           FARNUM          76         77         72         59.7         12.2         7         37         167           IDO651          71         71         70	WA008096				78	60.4	12.1	0	32	164
PEREGRINE          77         76         61.6         10.8         13         37         161           ELTAN          79         75         75         60.6         11.2         0         32         185           HATTON          75         72         75         62.8         12.4         3         37         163           IDOGSS          75         62.0         11.2         3         34         161           ESPERIA          75         60.5         12.0         0         26         157           WA008022          75         71         74         59.8         10.6         0         32         162           ACCIPITER          73         72         72         62.1         11.7         37         37         162           FARNUM          76         77         72         59.7         12.2         7         37         167           IDO651          71         71         70         62.3         12.6         0         29         161           NORRIS          71         71 <td></td> <td></td> <td></td> <td></td> <td>77</td> <td>61.3</td> <td>11.7</td> <td>0</td> <td>33</td> <td>159</td>					77	61.3	11.7	0	33	159
HATTON 75 72 75 62.8 12.4 3 37 163  IDO658 7 75 62.0 11.2 3 34 161  ESPERIA 75 60.5 12.0 0 26 157  WA008022 75 71 74 59.8 10.6 0 32 162  ACCIPITER 73 72 72 62.1 11.7 37 37 37 162  FINLEY 73 72 72 62.1 11.7 37 37 37 167  IDO651 76 77 72 59.7 12.2 7 37 167  IDO651 71 71 70 62.3 12.6 0 29 161  AGRIPRO PALADIN 71 71 71 70 62.3 12.6 0 29 161  SWA008061 68 68 68 60.7 12.9 37 39 164  BC002-2 74 66 61.6 13.6 0 26 158  IDO683 65 64 61.2 11.3 0 26 158  IDO683 64 59 54 62.2 11.9 17 34 159  MIDIAKOTA 64 59 54 62.2 11.9 17 34 159  MIDIAKOTIA 62 56 52 61.1 13.4 0 26 158  MOLD 5 8 12 0.4 0.7 14 3 1  AVERAGE 77 75 75 74 61.3 12.1 6 32 161  Highest 89 88 92 62.8 14.3 37 40 167				77	76	61.6	10.8	13	37	161
TOGGS	ELTAN		79	75	75	60.6	11.2	0	32	165
The color of the	HATTON		75	72	75	62.8	12.4	3	37	163
The series	IDO658				75	62.0	11.2	3	34	161
ACCIPITER 73 73 61.7 11.8 0 28 163  FINLEY 73 72 72 62.1 11.7 37 37 162  FARNUM 76 77 72 59.7 12.2 7 37 167  IDO651 71 71 60.8 12.1 10 40 162  AGRIPRO PALADIN 71 71 71 70 62.3 12.6 0 29 161  NORRIS 68 68 68 60.7 12.9 37 39 164  BC002-2 74 66 61.6 13.6 0 26 158  IDO683 65 61.6 13.5 37 33 160  NUIDAKOTA 64 59 54 62.2 11.3 0 26 156  UI DARWIN 64 59 54 62.2 11.9 17 34 159  PALOMINO 62 56 52 61.1 13.4 0 26 158  MOLL 52 60.6 14.3 0 25 158  C.V. % 10 12 11 0.5 4.5 166 6 1  LSD '@ .10' 5 8 8 12 0.4 0.7 14 3 1  Average 77 75 74 61.3 12.1 6 32 161  Highest 89 88 92 62.8 14.3 37 40 167					75	60.5	12.0	0	26	157
FINLEY          73         72         72         62.1         11.7         37         37         162           FARNUM          76         77         72         59.7         12.2         7         37         167           IDO651          71         71         60.8         12.1         10         40         162           AGRIPRO PALADIN          71         71         70         62.3         12.6         0         29         161           NORRIS          71         71         70         62.3         12.6         0         29         161           NORRIS          68         68         68         60.7         12.9         37         39         164           BC002-2          74         66         61.6         13.6         0         26         158           ID0683          65         64         61.2         11.3         0         26         158           ID0AKUTA          64         59         54         62.2         11.9         17         34         159           MIETT         -	WA008022		75	71	74	59.8	10.6	0		162
FARNUM          76         77         72         59.7         12.2         7         37         167           IDO651          71         60.8         12.1         10         40         162           AGRIPRO PALADIN          71         71         70         62.3         12.6         0         29         161           NORRIS          69         61.9         11.8         0         33         158           WA008061          68         68         60.7         12.9         37         39         164           BC002-2          74         66         61.6         13.6         0         26         158           IDO683          65         64         61.2         11.3         0         26         158           IDO683          65         64         61.2         11.3         0         26         158           IDO683          65         64         61.2         11.3         0         26         158           IDO684          65         64         61.2         11.3         0 <th< td=""><td>ACCIPITER</td><td></td><td></td><td></td><td>73</td><td>61.7</td><td>11.8</td><td>0</td><td>28</td><td>163</td></th<>	ACCIPITER				73	61.7	11.8	0	28	163
FARNUM          76         77         72         59.7         12.2         7         37         167           IDO651          71         60.8         12.1         10         40         162           AGRIPRO PALADIN          71         71         70         62.3         12.6         0         29         161           NORRIS          69         61.9         11.8         0         33         158           WA008061          68         68         68         60.7         12.9         37         39         164           BC002-2          74         66         61.6         13.6         0         26         158           IDO683          65         64         61.2         11.3         0         26         158           IDO683          65         64         61.2         11.3         0         26         158           IDOARWIN          64         59         54         62.2         11.9         17         34         159           MIETT          62         56         52			73	72						
The color   The			76	77	72			7		
AGRIPRO PALADIN          71         71         70         62.3         12.6         0         29         161           NORRIS          69         61.9         11.8         0         33         158           WA008061          68         68         60.7         12.9         37         39         164           BC002-2          74         66         61.6         13.6         0         26         158           ID0683          65         61.6         13.5         37         33         160           NUDAKOTA          65         64         61.2         11.3         0         26         156           UI DARWIN          64         59         54         62.2         11.9         17         34         159           MIETT          53         59.8         13.3         0         21         157           PALOMINO          62         56         52         61.1         13.4         0         26         158           MOL          50         8         12         0.4         0.7         <	-				71			10		
NORRIS          69         61.9         11.8         0         33         158           WA008061          68         68         68         60.7         12.9         37         39         164           BC002-2          74         66         61.6         13.6         0         26         158           IDO683          65         61.6         13.5         37         33         160           NVIDAKOTA          65         64         61.2         11.3         0         26         156           UI DARWIN          64         59         54         62.2         11.9         17         34         159           MIETT          62         56         52         61.1         13.4         0         26         158           MOL          62         56         52         61.1         13.4         0         25         158           MOL          52         60.6         14.3         0         25         158           C.V. %          10         12         11         0.5         4.5		1	71	71					29	
WA008061          68         68         60.7         12.9         37         39         164           BC002-2          74         66         61.6         13.6         0         26         158           IDO683          65         61.6         13.5         37         33         160           NUDAKOTA          65         64         61.2         11.3         0         26         156           UI DARWIN          64         59         54         62.2         11.9         17         34         159           MIETI          62         56         52         61.1         13.4         0         26         158           PALOMINO          62         56         52         61.1         13.4         0         26         158           MOL          52         60.6         14.3         0         25         158           C.V. %          10         12         11         0.5         4.5         166         6         1           LSD '@ .10'          5         8         12         0.4 <td></td> <td></td> <td></td> <td></td> <td>69</td> <td></td> <td></td> <td></td> <td></td> <td></td>					69					
BC002-2          74         66         61.6         13.6         0         26         158           ID0683          65         61.6         13.5         37         33         160           NUDAKOTA          65         64         61.2         11.3         0         26         156           UI DARWIN          64         59         54         62.2         11.9         17         34         159           MIETI          62         56         52         61.1         13.4         0         21         157           PALOMINO          62         56         52         61.1         13.4         0         26         158           MOL          62         56         52         61.1         13.4         0         26         158           MOL          52         60.6         14.3         0         25         158           C.V. %          10         12         11         0.5         4.5         166         6         1           LSD '@ .10'          5         8         12				68						
IDO683	BC002-2			74	66	61.6	13.6	0	26	158
NUDAKOTA          65         64         61.2         11.3         0         26         156           UI DARWIN          64         59         54         62.2         11.9         17         34         159           MIETI          53         59.8         13.3         0         21         157           PALOMINO          62         56         52         61.1         13.4         0         26         158           MOL          62         56         52         60.6         14.3         0         25         158           C.V. %          10         12         11         0.5         4.5         166         6         1           LSD '@ .10'          5         8         12         0.4         0.7         14         3         1           Average          77         75         74         61.3         12.1         6         32         161           Highest          89         88         92         62.8         14.3         37         40         167										
UI DARWIN          64         59         54         62.2         11.9         17         34         159           MIETI          53         59.8         13.3         0         21         157           PALOMINO          62         56         52         61.1         13.4         0         26         158           MOL          52         60.6         14.3         0         25         158           C.V. %          10         12         11         0.5         4.5         166         6         1           LSD '@.10'          5         8         12         0.4         0.7         14         3         1           Average          77         75         74         61.3         12.1         6         32         161           Highest          89         88         92         62.8         14.3         37         40         167	NUDAKOTA			65	64		11.3	0	26	156
MIETT          53         59.8         13.3         0         21         157           PALOMINO          62         56         52         61.1         13.4         0         26         158           MOL          52         60.6         14.3         0         25         158           C.V. %          10         12         11         0.5         4.5         166         6         1           LSD '@.10'          5         8         12         0.4         0.7         14         3         1           Average          77         75         74         61.3         12.1         6         32         161           Highest          89         88         92         62.8         14.3         37         40         167			64	59	54				34	
PALOMINO          62         56         52         61.1         13.4         0         26         158           MOL          52         60.6         14.3         0         25         158           C.V. %          10         12         11         0.5         4.5         166         6         1           LSD '@.10'          5         8         12         0.4         0.7         14         3         1           Average          77         75         74         61.3         12.1         6         32         161           Highest          89         88         92         62.8         14.3         37         40         167					53		13.3	0	21	157
MOL          52         60.6         14.3         0         25         158           C.V. %          10         12         11         0.5         4.5         166         6         1           LSD '@.10'          5         8         12         0.4         0.7         14         3         1           Average          77         75         74         61.3         12.1         6         32         161           Highest          89         88         92         62.8         14.3         37         40         167			62	56						
C.V. % 10 12 11 0.5 4.5 166 6 1 LSD '@ .10' 5 8 12 0.4 0.7 14 3 1 Average 77 75 74 61.3 12.1 6 32 161 Highest 89 88 92 62.8 14.3 37 40 167										
LSD '@.10' 5 8 12 0.4 0.7 14 3 1 Average 77 75 74 61.3 12.1 6 32 161 Highest 89 88 92 62.8 14.3 37 40 167			10	12	-			-		
Average      77     75     74     61.3     12.1     6     32     161       Highest      89     88     92     62.8     14.3     37     40     167										
Highest 89 88 92 62.8 14.3 37 40 167	-									
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- 1. Grain yield in the Reardan Hard winter wheat trial averaged 74 bu/ac, 3 bu/ac less than the 3-year average yield at this location. The Reardan nursery was located about 6 miles west of Reardan, WA (Hal Johnson, cooperator).
- 2. This nursery was seeded on 25 September, 2008 following summer fallow. Seed was placed at an 85#/acre seeding rate using a double disc plot drill set on 6-inch spacing. Base fertilizer was 85#N, 7#P, and 5#S applied in the fall. Spring soil test showed adequate fertilizer available for hard wheat and no additional spring fertilizer was applied. Seeding conditions produced good stands that overwintered well. Alpha lattice experimental designs improved variation allocation during statistical analysis and the CV by 28% compared to previously used designs.
- 3. Yields ranged from 52 bu/ac to 92 bu/ac. There was more variability than desired at this trial which contributed to a CV of 11%. Yield values within the LSD range of the highest yield are shown in bold and included eight cultivars. Hard white variety names are designated by italicized print.
- 4. Test weights were good with an average of 61.3 lb/bu. Grain protein averaged 12.1% with a range of 10.6 to 14.3%. The average plant height was 32 inches.