2009 WSU EXTENSION IRRIGATED HARD WINTER WHEAT NURSERY AT MOSES LAKE, WA.

| Class |  | 5 YEAR | 3 YEAR | 2 YEAR | 2009 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Variety Name A | AVERAGE <br> (BU/A) | AVERAGE <br> (BU/A) | AVERAGE <br> (BU/A) | YIELD <br> (BU/A) | TEST WT <br> (LBS/BU) | PROTEIN <br> (\%) | LODGING <br> (\%) | $\begin{gathered} \text { PLANT } \\ \text { HT } \end{gathered}$ | $\begin{aligned} & \text { HEAD } \\ & \text { DATE } \end{aligned}$ |
| HRW | ACS 52025 |  | 193 | 201 | 209 | 62.7 | 11.4 | 57 | 36 | 150 |
| SWH | VW-30 |  |  |  | 199 | 60.7 | 12.0 | 77 | 39 | 151 |
| HDWH | NUDAKOTA |  |  | 184 | 197 | 63.2 | 11.9 | 27 | 33 | 149 |
| SWH | VW-29 |  |  |  | 196 | 60.9 | 11.6 | 53 | 38 | 154 |
| HRW | ML9W05-2506 |  | 181 | 183 | 195 | 63.7 | 11.5 | 13 | 38 | 150 |
| HDWH | IDO651 |  | 154 | 159 | 195 | 62.4 | 12.8 | 77 | 47 | 150 |
| HRW | WHETSTONE | 162 | 176 | 183 | 194 | 62.3 | 12.2 | 0 | 36 | 148 |
| SWH | STEPHENS | 163 | 175 | 185 | 193 | 58.7 | 10.7 | 3 | 37 | 152 |
| HRW | ACCIPITER |  |  | 176 | 191 | 62.5 | 11.2 | 40 | 38 | 151 |
| SWH | MJ-9 |  |  |  | 188 | 57.7 | 10.8 | 27 | 34 | 154 |
| HRW | BC002-2 |  |  | 188 | 188 | 61.8 | 12.3 | 53 | 35 | 150 |
| HRW | BOUNDARY | 163 | 165 | 165 | 185 | 61.0 | 11.8 | 43 | 36 | 153 |
| SWH | YIELDSTAR 45 |  |  |  | 185 | 59.0 | 11.4 | 47 | 39 | 154 |
| SWH | WA008063 |  |  |  | 183 | 59.1 | 11.2 | 0 | 33 | 151 |
| SWH | WA008065 |  |  |  | 181 | 60.1 | 11.9 | 27 | 37 | 152 |
| SRW | DH99-55-2 |  |  |  | 179 | 59.4 | 11.4 | 57 | 37 | 151 |
| HRW | EDDY | 154 | 164 | 167 | 174 | 63.2 | 11.5 | 7 | 36 | 151 |
| HRW | PEREGRINE |  |  |  | 174 | 63.4 | 11.6 | 43 | 42 | 150 |
| HDWH | PALOMINO | 161 | 165 | 168 | 173 | 61.8 | 11.9 | 0 | 31 | 149 |
| HDWH | UI DARWIN |  | 150 | 152 | 172 | 62.4 | 11.4 | 83 | 40 | 151 |
| SWH | WA008064 |  |  |  | 172 | 58.9 | 11.4 | 0 | 33 | 150 |
| HRW | ESPERIA |  |  |  | 172 | 61.7 | 12.5 | 0 | 29 | 148 |
| SWH | FE-35 |  |  |  | 168 | 59.1 | 11.3 | 23 | 35 | 156 |
| HRW | AGRIPRO PALADIN | IN 152 | 156 | 158 | 167 | 61.5 | 12.1 | 27 | 36 | 152 |
| HRW | BAUERMEISTER | 142 | 158 | 156 | 162 | 60.0 | 12.0 | 73 | 39 | 156 |
| HRW | ID0653 |  | 147 | 143 | 158 | 63.7 | 13.6 | 50 | 45 | 150 |
| HRW | DECLO | 146 | 144 | 156 | 157 | 60.4 | 12.0 | 0 | 34 | 152 |
| HRW | NORWEST 553 | 160 | 155 | 167 | 151 | 61.6 | 12.1 | 0 | 28 | 154 |
| HDWH | MOL |  |  |  | 120 | 62.6 | 13.2 | 0 | 28 | 149 |
| HDWH | MIETI |  |  |  | 26 | 57.4 | 14.0 | 0 | 20 | 152 |
|  | C.V. \% | 7 | 6 | 5 | 6 | 0.9 | 3.1 | 79 | 6 | 1 |
|  | LSD '@.10' | 6 | 7 | 8 | 14 | 0.8 | 0.5 | 33 | 3 | 2 |
|  | Average | 156 | 163 | 170 | 173 | 61.1 | 11.9 | 30 | 36 | 151 |
|  | Highest | 163 | 193 | 201 | 209 | 63.7 | 14.0 | 83 | 47 | 156 |
|  | Lowest | 142 | 144 | 143 | 26 | 57.4 | 10.7 | 0 | 20 | 148 |

1. Grain yield in the Moses Lake irrigated hard winter wheat trial averaged 173 bu/ac and was $11 \%$ higher than the 5 -year average for this site. This trial has a unique entry list and is not common to other hard winter wheat trials, but many of the entries overlap. There are hard red, hard white, soft white, and soft red entries in this trial. These classes are designated in the column before the names. The Moses Lake nursery was located about 6 miles southeast of Moses Lake, WA (Randee Bergeson, cooperator).
2. This nursery was seeded on 22 October, 2008 following a crop of onions. Seed was placed at
 was $100 \# \mathrm{~N}, 25 \# \mathrm{~K}$, and $25 \#$ P applied in the fall. An additional $100 \# \mathrm{~N}$ was applied through the sprinkler irrigation system during the growing season. Seeding conditions produced good stands that overwintered well with only noticeable winter injury to the most vulnerable varieties. Alpha lattice experimental designs improved variation allocation during statistical analysis and the CV by $67 \%$ compared to previously used designs.
3. Yields ranged from 26 bu/ac to 209 bu/ac, with a CV of $6 \%$. Yield values within the LSD range of the highest yield are shown in bold and included four cultivars.
4. Most test weights were good with an average of $61.1 \mathrm{lb} / \mathrm{bu}$. Lodging was highly variable with some cultivars expressing lodging early. Grain protein averaged $11.9 \%$ with a range of $10.7 \%$ to $14.0 \%$. The average plant height was 36 inches.
