

**Table 17. 2017 Advanced Winter Wheat Nursery Mill & Bake (Exp. 14)**

**Location: Means Across Locations**

| Sample No.<br>i = lines in 2019 Intrastate | Variety  | Pedigree                        | Class | PPO   | Single kernel hardness | Wheat Protein, % (12% m.b.) | Flour Yield, % | Flour Protein, % (14% m.b.) | L* Brightness | a* Green - Red | b* Blue - Yellow | Wheat Ash, % | Flour Ash, % | Mixing Tolerance | Mixo Mixing Time, min | Mixo Water Absorption, % | Bake Mixing Time, min | Bake Water Absorption, % | Loaf Volume | Crumb Grain Score |
|--|----------|---------------------------------|-------|-------|------------------------|-----------------------------|----------------|-----------------------------|---------------|----------------|------------------|--------------|--------------|------------------|-----------------------|--------------------------|-----------------------|--------------------------|-------------|-------------------|
|  |          |                                 |       |       |                        |                             |                |                             |               |                |                  |              |              |                  |                       |                          |                       |                          |             |                   |
| 1  | Judee    | check                           | HRW   | 0.235 | 82.8                   | 13.6                        | 70.1           | 12.8                        | 89.5          | -1.61          | 11.1             | 1.42         | 0.41         | 3.5              | 5.0                   | 65.6                     | 7.8                   | 76.3                     | 1176        | 5.5               |
| 2  | Decade   | check                           | HRW   | 0.291 | 81.1                   | 13.3                        | 69.6           | 12.3                        | 89.8          | -1.40          | 9.8              | 1.36         | 0.41         | 2.8              | 8.6                   | 72.4                     | 20.0                  | 82.6                     | 1054        | 5.0               |
| 3  | Warhorse | check                           | HRW   | 0.250 | 90.0                   | 14.1                        | 69.2           | 12.9                        | 89.1          | -1.56          | 11.2             | 1.38         | 0.43         | 1.5              | 5.1                   | 69.2                     | 7.7                   | 79.0                     | 1103        | 5.0               |
| 4  | SY Wolf  | check                           | HRW   | 0.303 | 77.0                   | 13.2                        | 69.9           | 12.2                        | 89.7          | -1.98          | 12.1             | 1.38         | 0.41         | 0.8              | 4.6                   | 64.4                     | 7.9                   | 74.2                     | 1031        | 5.3               |
| 5  | MTCS1601 | MTS0531/7/MTS0532/6/96X17E69    | HRW   | 0.341 | 73.6                   | 13.4                        | 71.3           | 12.5                        | 89.5          | -1.84          | 12.1             | 1.41         | 0.40         | 2.8              | 5.4                   | 67.5                     | 10.6                  | 77.3                     | 1071        | 5.3               |
| 6  | MT1687   | Yellowstone(L)*2/(OK00611W, OK  | HRW   | 0.288 | 77.5                   | 13.6                        | 70.1           | 12.4                        | 89.5          | -1.08          | 9.5              | 1.36         | 0.42         | 3.5              | 4.7                   | 70.3                     | 6.9                   | 79.4                     | 1058        | 4.8               |
| 7  | MT1688   | Yellowstone(L)*2/(OK00611W, OK  | HRW   | 0.294 | 76.9                   | 13.9                        | 70.5           | 12.9                        | 89.5          | -1.18          | 9.9              | 1.40         | 0.42         | 3.5              | 4.4                   | 70.7                     | 6.4                   | 79.8                     | 1054        | 4.5               |
| 8  | MT1695   | Yellowstone*2/PI640431          | HRW   | 0.150 | 77.9                   | 12.9                        | 69.3           | 11.9                        | 89.6          | -1.80          | 11.5             | 1.33         | 0.40         | 2.5              | 6.3                   | 67.6                     | 10.0                  | 77.3                     | 1083        | 4.8               |
| 9  | MT16101  | MT08185//YLL*2/PI640431/3/Prom  | HRW   | 0.282 | 75.9                   | 13.0                        | 72.1           | 12.0                        | 89.2          | -1.45          | 10.9             | 1.34         | 0.43         | 1.5              | 3.9                   | 65.4                     | 5.3                   | 73.3                     | 980         | 5.0               |
| 10   | MTF1631  | MT08184*3/YLL(L)*2/98X168E1     | HRW   | 0.081 | 79.8                   | 13.3                        | 70.7           | 12.5                        | 89.1          | -1.35          | 10.7             | 1.29         | 0.42         | 3.5              | 6.6                   | 68.2                     | 11.4                  | 78.1                     | 1091        | 5.5               |
| 11   | MT1642   | Yellowstone/Madsen//Yellowstone | HRW   | 0.137 | 76.1                   | 13.4                        | 70.2           | 12.4                        | 89.5          | -1.41          | 10.6             | 1.40         | 0.40         | 3.8              | 9.4                   | 69.2                     | 14.2                  | 79.6                     | 1191        | 5.5               |
| 12   | MTV1681  | Yellowstone*2//WillowCreek/MT06 | HRW   | 0.106 | 78.4                   | 13.4                        | 70.0           | 12.3                        | 89.2          | -1.51          | 11.2             | 1.37         | 0.44         | 3.5              | 10.6                  | 70.7                     | 20.3                  | 81.5                     | 1081        | 4.8               |
| 13   | MT1683   | Yellowstone(L)*2/CDC Buteo      | HRW   | 0.281 | 76.6                   | 13.2                        | 70.4           | 12.1                        | 89.2          | -1.59          | 11.5             | 1.39         | 0.43         | 2.8              | 8.5                   | 68.3                     | 14.9                  | 79.0                     | 1074        | 4.8               |
| Average                                    |          |                                 |       | 0.234 | 78.7                   | 13.4                        | 70.3           | 12.4                        | 89.4          | -1.52          | 10.9             | 1.37         | 0.42         | 2.8              | 6.4                   | 68.4                     | 11.0                  | 78.2                     | 1080        | 5.0               |
| LSD (0.05)                                 |          |                                 |       | 0.052 | 4.4                    | 0.5                         | 1.0            | 0.5                         | 0.4           | 0.09           | 0.3              | ns           | 0.01         | 0.9              | 1.6                   | 3.0                      | 3.6                   | 3.0                      | 63          | ns                |
| C.V.                                       |          |                                 |       | 15.4  | 3.9                    | 2.6                         | 0.9            | 2.6                         | 0.3           | 4.0            | 1.8              | 4.2          | 2.4          | 22.4             | 17.6                  | 3.1                      | 22.7                  | 2.7                      | 4.1         | 15.9              |

**bold** = indicates highest value within a column

**bold** = indicates varieties with values equal to highest variety within a column based on Fisher's protected LSD (p=0.05)

**Table 21. 2017 Advanced Winter Wheat Nursery (Exp. 14): Noodles**

**Location: 4 Location Means**

| Sample No.<br>i = lines in 2019 Intrastate | Variety  | Pedigree                        | Class | Noodle Color              |                            |                              |                            |                             |                               |                                 | Texture Profile Analysis |                      |                       |                       |                      |                    |                      |                       |                       |                      |                    |  |
|--|----------|---------------------------------|-------|---------------------------|----------------------------|------------------------------|----------------------------|-----------------------------|-------------------------------|---------------------------------|--------------------------|----------------------|-----------------------|-----------------------|----------------------|--------------------|----------------------|-----------------------|-----------------------|----------------------|--------------------|--|
|  |          |                                 |       | L* at 0 hour (Brightness) | a* at 0 hour (Green - Red) | b* at 0 hour (Blue - Yellow) | L* at 24 hour (Brightness) | a* at 24 hour (Green - Red) | b* at 24 hour (Blue - Yellow) | 24 hour L* Stability (0hr-24hr) | Noodle Score             | Springiness at 0 min | Cohesiveness at 0 min | Adhesiveness at 0 min | Hardness, g at 0 min | Chewiness at 0 min | Springiness at 5 min | Cohesiveness at 5 min | Adhesiveness at 5 min | Hardness, g at 5 min | Chewiness at 5 min |  |
| 1  | Judee    | check                           | HRW   |                           |                            |                              |                            |                             |                               |                                 |                          |                      |                       |                       |                      |                    |                      |                       |                       |                      |                    |  |
| 2  | Decade   | check                           | HRW   |                           |                            |                              |                            |                             |                               |                                 |                          |                      |                       |                       |                      |                    |                      |                       |                       |                      |                    |  |
| 3  | Warhorse | check                           | HRW   |                           |                            |                              |                            |                             |                               |                                 |                          |                      |                       |                       |                      |                    |                      |                       |                       |                      |                    |  |
| 4  | SY Wolf  | check                           | HRW   |                           |                            |                              |                            |                             |                               |                                 |                          |                      |                       |                       |                      |                    |                      |                       |                       |                      |                    |  |
| 5  | MTCS1601 | MTS0531/7/MTS0532/6/96X17E69    | HRW   | 83.1                      | 0.15                       | 21.6                         | 70.4                       | 0.40                        | 26.2                          | 12.7                            | 223                      | 0.94                 | 0.64                  | -45.9                 | 1079                 | 646                | 0.93                 | 0.59                  | -42.7                 | 906                  | 498                |  |
| 6  | MT1687   | Yellowstone(L)*2/(OK00611W, OK  | HRW   | 84.5                      | 0.88                       | 16.6                         | 75.1                       | 1.95                        | 22.1                          | 9.4                             | 292                      | 0.93                 | 0.63                  | -45.5                 | 1116                 | 649                | 0.93                 | 0.58                  | -34.6                 | 925                  | 496                |  |
| 7  | MT1688   | Yellowstone(L)*2/(OK00611W, OK  | HRW   | 84.3                      | 0.81                       | 17.2                         | 75.2                       | 1.92                        | 22.8                          | 9.2                             | 292                      | 0.94                 | 0.63                  | -46.5                 | 1164                 | 691                | 0.93                 | 0.58                  | -37.5                 | 955                  | 512                |  |
| 8  | MT1695   | Yellowstone*2/PI640431          | HRW   | 84.6                      | 0.02                       | 19.7                         | 74.5                       | 0.85                        | 26.2                          | 10.2                            | 276                      | 0.93                 | 0.67                  | -34.2                 | 980                  | 610                | 0.93                 | 0.61                  | -33.7                 | 830                  | 469                |  |
| 9  | MT16101  | MT08185//YLL*2/PI640431/3/Prom  | HRW   | 84.9                      | 0.54                       | 17.6                         | 74.4                       | 1.45                        | 25.5                          | 10.5                            | 262                      | 0.93                 | 0.63                  | -38.6                 | 965                  | 562                | 0.93                 | 0.56                  | -31.8                 | 820                  | 425                |  |
| 10   | MTF1631  | MT08184*3/YLL(L)*2/98X168E1     | HRW   | 85.9                      | 0.49                       | 16.0                         | 76.6                       | 1.83                        | 23.1                          | 9.3                             | 291                      | 0.93                 | 0.63                  | -50.0                 | 1110                 | 652                | 0.92                 | 0.58                  | -40.4                 | 894                  | 475                |  |
| 11   | MT1642   | Yellowstone/Madsen//Yellowstone | HRW   | 85.3                      | 0.47                       | 17.3                         | 74.6                       | 0.90                        | 24.2                          | 10.7                            | 256                      | 0.94                 | 0.63                  | -45.3                 | 1176                 | 699                | 0.92                 | 0.58                  | -39.0                 | 941                  | 501                |  |
| 12   | MTV1681  | Yellowstone*2//WillowCreek/MT06 | HRW   | 85.9                      | 0.38                       | 16.3                         | 76.8                       | 1.57                        | 23.8                          | 9.1                             | 297                      | 0.94                 | 0.65                  | -47.9                 | 1214                 | 744                | 0.92                 | 0.59                  | -41.4                 | 1030                 | 560                |  |
| 13   | MT1683   | Yellowstone(L)*2/CDC Buteo      | HRW   | 85.5                      | 0.27                       | 17.4                         | 75.2                       | 1.38                        | 24.4                          | 10.3                            | 271                      | 0.92                 | 0.64                  | -46.1                 | 1162                 | 682                | 0.93                 | 0.58                  | -33.7                 | 938                  | 504                |  |
| Average                                    |          |                                 |       | 84.9                      | 0.44                       | 17.7                         | 74.8                       | 1.36                        | 24.3                          | 10.2                            | 273                      | 0.93                 | 0.64                  | -44.4                 | 1107                 | 659                | 0.92                 | 0.58                  | -37.2                 | 915                  | 494                |  |
| LSD (0.05)                                 |          |                                 |       | 0.2                       | 0.14                       | 0.9                          | 1.5                        | 0.3                         | 0.9                           | 1.0                             | 22                       | ns                   | 0.01                  | ns                    | 84                   | 49                 | ns                   | 0.01                  | ns                    | 60                   | 34                 |  |
| C.V.                                       |          |                                 |       | 0.6                       | 21.8                       | 3.3                          | 1.3                        | 13.6                        | 2.6                           | 6.5                             | 5.5                      | 1.3                  | 1.6                   | 19.4                  | 5.2                  | 5.0                | 1.3                  | 1.7                   | 20.2                  | 4.5                  | 4.8                |  |