

2018 Dryland Wheat Variety Trial Results

Results for the 2018 dryland trials located in Pine Bluffs, WY. Trials were seeded on 9/13/2017 at a population of 950,000 seeds/a. Trials were harvested on 7/20/18 using a Kincaid XP-8 plot combine. Yield \pm STDV is reported as bu/a based on a standard 60 lb bushel at 13.5% seed moisture. The general linear model for yield was not significant for variety.

| Variety | Yield bu/a ¹ | TWT | % Moisture | % protein ¹ | Seeding lbs/a | Appx Heading Date | Height (in) | Rust % Infected | Sep/TS % Infected | Disease Severity |
|-------------------------|-------------------------|----------|---------------|------------------------|---------------|-------------------|-------------|-----------------|-------------------|------------------|
| FourOsix (MT1465) | 69.2 \pm 27.1 | 58.3 AB | 10.3 IJFGH | 8.1 | 68 | 1-Jun 7-Jun | 29 | 30% | 90% | 3 |
| Avery | 67.7 \pm 19.0 | 58.3 AB | 10.4 IJDEFGH | 7.4 | 74 | 31-May 7-Jun | 30 | 20% | 80% | 2 |
| CO15D098R | 63.4 \pm 17.1 | 58.6 AB | 10.5 IDEFGH | 7.3 | 80 | 30-May 6-Jun | 31 | 0% | 40% | 1 |
| Winterhawk | 63.3 \pm 2.7 | 57.8 B | 10.4 IJDEFGH | 7.8 | 96 | 30-May 6-Jun | 30 | 90% | 80% | 3 |
| Byrd CL Plus (CO13003C) | 62.4 \pm 22.0 | 57.7 B | 10.6 ICDEFGH | 7.3 | 65 | 2-Jun 8-Jun | 29 | ND | ND | ND |
| Canvas (CO12D1770) | 61.6 \pm 4.8 | 59.2 AB | 10.7 IBCDEFGH | 7.7 | 68 | 31-May 7-Jun | 27 | 10% | 80% | 2 |
| Cowboy | 60.0 \pm 16.5 | 58.3 AB | 11.2 ABCDEF | 7.5 | 78 | 31-May 7-Jun | 28 | 80% | 30% | 2 |
| Breck (CO12D2011HT) | 60.0 \pm 8.5 | 61.4 A | 11.7 A | 7.2 | 72 | 1-Jun 7-Jun | 29 | 60% | 100% | 3 |
| CO15SFD061 (SFD) | 59.6 \pm 20.5 | 59.5 AB | 11.0 ABCDEFGH | 7.1 | 70 | 30-May 6-Jun | 29 | 0% | 80% | 1 |
| SY Monument | 59.2 \pm 3.3 | 57.9 B | 10.2 IJFGH | 7.8 | 83 | 2-Jun 8-Jun | 29 | 30% | 30% | 1 |
| Sunshine | 56.8 \pm 21.3 | 59.5 AB | 10.4 IJDEFGH | 7.8 | 94 | 1-Jun 7-Jun | 28 | 10% | 60% | 2 |
| CO15SFD095 (SFD) | 55.6 \pm 12.3 | 59.5 AB | 11.6 A | 8.2 | 56 | 31-May 7-Jun | 29 | 60% | 90% | 2 |
| 07CL046-2 | 55.2 \pm 10.3 | 58.9 AB | 9.8 IJ | 8.3 | 65 | 1-Jun 7-Jun | 28 | 10% | 50% | 1 |
| WB-Grainfield | 54.4 \pm 7.1 | 57.2 B | 10.0 IJH | 7.8 | 65 | 1-Jun 7-Jun | 29 | 0% | 60% | 1 |
| CO13007 | 54.1 \pm 14.5 | 58.0 AB | 10.1 IJGH | 7.5 | 74 | 1-Jun 7-Jun | 29 | 20% | 80% | 2 |
| CO13D0787 | 54.1 \pm 13.4 | 58.4 AB | 11.3 ABCDE | 7.6 | 68 | 31-May 7-Jun | 29 | 30% | 30% | 0 |
| Cowboy/Spur | 54.0 \pm 13.3 | 58.5 AB | 10.5 IDEFGH | 7.5 | 68 | 3-Jun 8-Jun | 28 | 20% | 40% | 1 |
| Spur (SS) | 53.8 \pm 16.3 | 57.4 B | 10.3 IJFGH | 8.3 | 59 | 5-Jun 9-Jun | 27 | 20% | 40% | 1 |
| MTV1681 (WSM1) | 53.6 \pm 13.0 | 58.7 AB | 10.9 ABCDEFGH | 8.2 | 58 | 1-Jun 7-Jun | 29 | 40% | 60% | 1 |
| SY Wolf | 53.4 \pm 6.6 | 59.3 AB | 11.3 ABCD | 8.1 | 63 | 1-Jun 7-Jun | 29 | 40% | 20% | 1 |
| CO15SFD107 (SFD) | 53.2 \pm 17.3 | 58.8 AB | 10.7 IBCDEFGH | 7.6 | 60 | 31-May 7-Jun | 29 | 50% | 90% | 3 |
| WB4721 | 53.0 \pm 14.2 | 60.2 AB | 10.6 ICDEFGH | 8.5 | 72 | 2-Jun 8-Jun | 28 | 0% | 60% | 1 |
| CO15SFD092 (SFD) | 53.0 \pm 6.8 | 57.5 B | 10.4 IJDEFGH | 7.8 | 54 | 30-May 6-Jun | 29 | 100% | 90% | 3 |
| MT1265 | 52.7 \pm 12.7 | 58.2 AB | 10.7 IBCDEFGH | 7.8 | 78 | 31-May 7-Jun | 32 | 30% | 45% | 0 |
| WB4462 | 52.4 \pm 4.0 | 58.6 AB | 10.6 ICDEFGH | 7.7 | 87 | 2-Jun 8-Jun | 32 | 40% | 80% | 3 |
| Cowboy (50 lb/a) | 51.8 \pm 2.9 | 58.1 AB | 10.7 IBCDEFGH | 7.3 | 50 | 31-May 7-Jun | 30 | 30% | 70% | 2 |
| MT1491 | 50.2 \pm 20.3 | 58.5 AB | 10.5 IDEFGH | 8.1 | 70 | 31-May 7-Jun | 29 | 50% | 50% | 1 |
| MT1444 | 50.0 \pm 3.9 | 59.0 AB | 11.5 ABC | 7.9 | 52 | 1-Jun 7-Jun | 28 | 50% | 70% | 1 |
| SY Wolf (50 lb/a) | 49.7 \pm 10.7 | 60.1 AB | 10.8 ABCDEFGH | 8.2 | 50 | 2-Jun 8-Jun | 28 | 0% | 70% | 2 |
| Incline AX (CO14A065HT) | 49.7 \pm 12.0 | 57.8 B | 11.0 ABCDEFG | 7.7 | 64 | 4-Jun 9-Jun | 27 | 10% | 10% | 0 |
| MT1564 | 47.8 \pm 2.5 | 59.0 AB | 11.3 ABCD | 8.5 | 80 | 21-May 2-Jun | 31 | 50% | 60% | 1 |
| Freeman | 47.7 \pm 21.0 | 57.2 B | 9.6 KJ | 8.1 | 78 | 30-May 6-Jun | 29 | 40% | 60% | 2 |
| Langin | 44.8 \pm 9.7 | 58.0 AB | 10.2 IJGH | 7.8 | 72 | 31-May 7-Jun | 25 | 0% | 70% | 1 |
| MTS1588 (SS) | 43.8 \pm 5.8 | 60.6 AB | 10.9 ABCDEFGH | 8.6 | 56 | 3-Jun 8-Jun | 26 | 0% | 100% | 3 |
| Warhorse (50 lb/a) (SS) | 43.6 \pm 13.3 | 59.5 AB | 11.5 AB | 9.2 | 50 | 2-Jun 8-Jun | 28 | 20% | 70% | 2 |
| Warhorse (SS) | 42.4 \pm 7.5 | 59.8 AB | 10.9 ABCDEFGH | 9.4 | 47 | 3-Jun 8-Jun | 29 | 0% | 70% | 2 |
| NHH144913-3 | 41.2 \pm 9.2 | nd | 9.1 K | 8.0 | 78 | 3-Jun 8-Jun | 27 | 20% | 30% | 1 |
| Hatcher | 41.1 \pm 9.9 | 58.9 AB | 10.8 ABCDEFGH | 7.6 | 73 | 1-Jun 7-Jun | 27 | 50% | 90% | 3 |
| Whistler (CO13D1783) | 40.5 \pm 10.4 | nd | 10.4 IJDEFGH | 7.2 | 64 | 31-May 7-Jun | 30 | 0% | 40% | 0 |
| Average | 53.3 NS | 58.7 *** | 10.6 *** | | | | | | | |

¹ all yield and protein data are corrected to 13.5% moisture

²note, seeding lbs/a for Spur is based on seed harvested in 2018

SFD = Sawfly, Doubled Haploid (semi solid stem); SS = Solid Stem; nd = no data

NS = data not significantly different; *** = significant at $p > 0.001$, Letters indicate significant differences based on the Student-Newman-Keuls test at $\alpha = 0.05$

Heading data was taken on 6/13/18, Height data was taken on 8/1/18

Grain Protein Analysis was done by John Stromberger, CSU Wheat Quality Laboratory using near-infrared reflectance spectroscopy (NIRs)