UNIVERSITY of NEBRASKA
LINCOLN

# Cheyenne County Rainfed
# 2022 Winter Wheat Variety Trial with Intensive Management

| Name | Company | Yield (bu/ac)[1] | Test Weight (lb/bu) | Protein (%)[2] | Plant Height (in) | Seed Weight (1000 seeds/lb) | Freeze Damage Score[3] | Sawfly Damage Score[4] |
|---|---|---|---|---|---|---|---|---|
| **WB4483** | WestBred | **50.3** | 54.9 | 17.3 | 28.0 | 22.4 | **2.5** | 6.4 |
| **LCS Steel AX** | Limagrain Cereal Seeds | **49.8** | 55.4 | 16.0 | 28.3 | 24.7 | **2.8** | 6.2 |
| **Whistler** | PlainsGold | **49.0** | 56.3 | **18.5** | 28.8 | 19.5 | **3.3** | 6.7 |
| **WB4792** | WestBred | 43.7 | **58.3** | 15.4 | 27.8 | 20.9 | 4.2 | 5.7 |
| **AP Solid** | AgriPro | 42.0 | **57.8** | 16.9 | 26.3 | 19.2 | 4.2 | **4.8** |
| **WB4595** | WestBred | 41.1 | **59.1** | 16.5 | 26.8 | 19.8 | 5.6 | 5.8 |
| **LCS Runner** | Limagrain Cereal Seeds | 37.1 | **57.5** | 16.7 | 25.5 | 20.2 | 5.7 | **4.9** |
| **Fortify SF** | PlainsGold | 36.9 | 56.2 | 16.6 | 27.0 | 22.1 | 5.3 | 5.5 |
| **Robidoux** | Husker Genetics | 36.8 | **57.4** | 17.2 | 26.8 | 19.1 | 4.9 | 6.4 |
| **Goodstreak** | Husker Genetics | 36.7 | **57.9** | 17.6 | 31.3 | 17.9 | 3.5 | 6.4 |
| **NE19619** | UNL-Experimental | 35.5 | 54.9 | 16.1 | 27.5 | 18.2 | 3.9 | 6.5 |
| **Epoch** | NuHorizon | 35.5 | 55.1 | 16.6 | 25.3 | 19.9 | 5.4 | 6.0 |
| **AP 18AX** | AgriPro | 35.2 | 56.7 | . | 26.8 | 17.9 | 4.8 | 6.1 |
| **AP Roadrunner** | AgriPro | 34.7 | 54.5 | 17.2 | 26.5 | 21.6 | 4.2 | 6.1 |
| **MS Maverick** | Meridian Seeds | 34.6 | **57.1** | 17.7 | 25.3 | 17.5 | 4.1 | 6.2 |
| **NE17544** | UNL-Experimental | 34.4 | 56.1 | 16.4 | 27.0 | 20.0 | 5.0 | 5.8 |
| **Amplify SF** | PlainsGold | 33.9 | **57.2** | 15.9 | 26.8 | 17.2 | 4.9 | 5.5 |
| **WB4422** | WestBred | 33.9 | **58.0** | 16.5 | 27.5 | 15.5 | 5.0 | 5.5 |
| **WB4510CLP** | WestBred | 32.8 | **58.7** | 15.7 | 26.3 | 19.6 | 4.3 | 6.5 |
| **NE18573** | UNL-Experimental | 32.7 | 56.5 | 16.9 | 27.3 | 19.5 | 5.3 | 6.0 |
| **NE16562** | UNL-Experimental | 32.7 | 55.2 | 17.2 | 27.3 | 19.5 | 6.7 | 5.8 |
| **Spur** | AgriPro | **32.6** | 52.1 | 16.2 | 25.3 | 18.6 | 5.1 | 5.5 |

[1] Yield values corrected to 12% moisture. Bolded values indicate highest LSD grouping. **Reminder!** Plot yields are often higher than surrounding field because area between plots provides more soil moisture, but the relative performance and differences are accurate.
[2] Protein corrected to 14% moisture, the correction factor used in analytical standards.
[3] Freeze damage rated about 1 month after the hard freezes at the end of May. A rating of 1 indicates little to no damage while 9 is severe and all of plot anticipated to be lost.
[4] Sawfly damage rated as in years past where 1 indicates little to no cutting of stems/lodging while 9 indicates a plot that is completely cut/lodged.

| Name | Company | Yield (bu/ac) | Test Weight (lb/bu) | Protein (%) | Plant Height (in) | Seed Weight (1000 seeds/lb) | Freeze Damage Score | Sawfly Damage Score |
|---|---|---|---|---|---|---|---|---|
| **Turkey** | Check | 32.3 | 56.3 | 16.7 | 32.5 | 18.4 | 4.4 | 7.0 |
| **SY Wolverine** | AgriPro | 32.2 | 56.9 | 17.6 | 24.5 | 15.5 | 4.5 | **5.4** |
| **WB4309** | WestBred | 32.0 | 56.8 | 16.6 | 25.5 | 20.0 | 5.3 | 5.6 |
| **CP7017AX** | CROPLAN | 31.8 | **57.0** | 16.4 | 24.3 | 17.7 | 5.9 | 5.8 |
| **NE17441** | UNL-Experimental | 31.8 | 56.8 | 16.6 | 27.0 | 18.6 | 5.5 | 6.2 |
| **LCS Photon AX** | Limagrain Cereal Seeds | 31.7 | **58.3** | 17.6 | 26.8 | 19.3 | 6.3 | 6.0 |
| **MS Iceman** | Meridian Seeds | 31.7 | **58.0** | 16.3 | 26.0 | 20.1 | 5.1 | 6.1 |
| **NHH17612** | UNL-Experimental | 31.3 | **58.2** | 16.7 | 27.0 | 19.6 | 4.4 | 5.9 |
| **KS Hamilton** | Kansas Wheat Alliance | 30.8 | **58.0** | 17.5 | 26.3 | 16.9 | 7.0 | 5.7 |
| **Crescent AX** | PlainsGold | 30.7 | **57.8** | 16.1 | 28.0 | 14.2 | 5.3 | 6.1 |
| **LCS Helix AX** | Limagrain Cereal Seeds | 30.3 | **58.7** | 17.5 | 24.3 | 16.1 | 5.4 | 5.6 |
| **NI17410** | UNL-Experimental | 30.0 | 56.6 | **18.0** | 25.8 | 18.7 | 5.9 | 5.8 |
| **Pronghorn** | Husker Genetics | 28.6 | **57.6** | 16.6 | 30.5 | 18.6 | 4.4 | 6.0 |
| **NW15443** | UNL-Experimental | 27.8 | 53.8 | 16.4 | 25.5 | 13.4 | 5.9 | 6.1 |
| **NHH17450** | UNL-Experimental | 27.6 | **57.2** | 17.2 | 27.0 | 17.8 | 4.8 | 6.1 |
| **Langin** | PlainsGold | 27.2 | 56.9 | **18.2** | 25.5 | 14.9 | 6.5 | 6.0 |
| **CPX72166AX** | CROPLAN | 26.9 | 55.8 | 17.6 | 26.3 | 18.1 | 4.9 | 5.7 |
| **Settler CL** | Husker Genetics | 26.7 | 56.5 | 17.2 | 25.5 | 17.8 | 5.4 | 6.0 |
| **Ruth** | Husker Genetics | 25.4 | **57.0** | 17.2 | 28.3 | 19.1 | 4.9 | 5.9 |
| **NHH19668** | UNL-Experimental | 25.4 | 53.9 | 16.4 | 25.0 | 20.0 | 6.7 | 5.7 |
| **AP Bigfoot** | AgriPro | 24.8 | 56.0 | 15.6 | 26.0 | 16.6 | 4.6 | 6.4 |
| **CP7869** | CROPLAN | 23.8 | 56.5 | **18.1** | 23.8 | 16.2 | 5.8 | 6.3 |
| **LCS Link** | Limagrain Cereal Seeds | 23.7 | 56.2 | 16.7 | 24.0 | 19.4 | 5.5 | 6.1 |
| **WB4418** | WestBred | 23.6 | 54.9 | **18.3** | 24.8 | 21.0 | 6.5 | **5.2** |
| **LCS Valiant** | Limagrain Cereal Seeds | 22.4 | 56.4 | 14.3 | 25.8 | 18.0 | 7.0 | 5.8 |
| **NE19590** | UNL-Experimental | 21.9 | 55.4 | 16.8 | 25.3 | 17.8 | 5.7 | 5.9 |
| **SY Legend** | AgriPro | 21.3 | **57.8** | 17.0 | 25.5 | 16.7 | 7.1 | 5.7 |
| **WB4462** | WestBred | 20.7 | 56.3 | 16.8 | 28.0 | 13.3 | 6.1 | 5.7 |
| **Scout 66** | Check | 17.9 | **57.3** | 17.2 | 30.3 | 16.8 | 6.2 | 6.3 |
| **Freeman** | Husker Genetics | 17.8 | 55.2 | 15.9 | 26.0 | 18.4 | 7.9 | **5.3** |

| Name | Company | Yield (bu/ac) | Test Weight (lb/bu) | Protein (%) | Plant Height (in) | Seed Weight (1000 seeds/lb) | Freeze Damage Score | Sawfly Damage Score |
|---|---|---|---|---|---|---|---|---|
| **CP7050AX** | CROPLAN | 17.4 | 56.9 | 16.1 | 25.8 | 17.0 | 6.9 | **5.2** |
| **LCS Atomic AX** | Limagrain Cereal Seeds | 15.9 | 52.1 | 16.9 | 25.0 | 14.2 | 7.6 | **5.1** |
| **Wesley** | Husker Genetics | 15.2 | 56.2 | 14.9 | 24.8 | 17.0 | 6.5 | **4.9** |
| | | | | | | | | |
| | **Standard Error** | 2.3 | 1.2 | 0.3 | 1.4 | 2.3 | 0.5 | 0.4 |
| | **LSD[5]** | 3.9 | 2.1 | 0.5 | 2.3 | 3.9 | 0.8 | 0.6 |
| | **Mean[6]** | 30.8 | 56.6 | 16.8 | 26.6 | 18.3 | 5.3 | 5.9 |
| | **CV[7]** | 7.6 | 2.2 | 1.6 | 5.2 | 12.6 | 8.9 | 6.5 |
| | **Reps** | 4 | 2 | 2 | 4 | 2 | 4 | 4 |

**SITE INFORMATION**

Collaborator: Jake Hansen, High Plains Ag Lab, Sidney, NE
Planting Date: September 14, 2021
Seeding Rate: 900,000 seeds/acre
Harvest Date: July 19, 2022
Fertility: 50 lb/a 32-0-0 streamed on Aug. 30, 2021; 87.5 lb/a 40 Rock in-furrow at planting; 10 lb N/a with 2.4-D April 2022; 50 lb N/a applied with streamer nozzles on 4/26/2022
Herbicide/Fungicides: 32 oz RoundUp, 8 oz 2,4-D LV6 preplant; 2 pt Prowl H2O and 6 oz 2,4-D LV6 in early May
Soil Type: Duroc & Alliance loams
GPS: 41.233281, -103.000321
Planting Info: Drilled into no-till fallowed millet stubble with double disk no-till drill on 10" centers
Notes on Trial: Field emerged well despite drought conditions at planting and had excellent early season growth in the spring. Continued drought conditions, freezes in late May during heading, intense heat during grain fill, and wheat stem sawfly pressure impacted yields, which should be used with caution. Freeze damage tended to be correlated to maturity, where earlier varieties were more affected. Intensive management had greater biomass and early season growth as compared to the conventionally managed plot area.



[5] For differences between varieties that are equal to or greater than the LSD value, the chance that the difference is significant is 90%.
[6] Mean performance of all entries in the trial.
[7] Coefficient of Variation (CV) indicates the quality of a trial, and lower than 15 indicates a high quality trial. For CV>15, there was higher than expected variability in the field or the data and the results should be used with caution.