

# Nebraska Wheat

## *2021 Top Planted Varieties*



## *Hard Red Winter Wheat Top Varieties*

Variety	% 50# Units Sold
SY MONUMENT	14.14%
Husker Genetics: SETTLER CL	8.45%
Husker Genetics: RUTH	7.33%
WB-GRAINFIELD	6.75%
SY WOLVERINE	6.63%
BRAWL CL PLUS	6.50%
LCS LINK	4.71%
WB4303	3.39%
Husker Genetics: ROBIDOUX	3.26%
AP503 CL2	2.96%
Husker Genetics: WESLEY	2.25%
WB4462	2.22%
Husker Genetics: FREEMAN	2.19%
WINTERHAWK	2.13%
Husker Genetics: OVERLAND	2.07%

*Variety sales reported but comprising less than 2% of sales include: LCS Fusion Ax, WB4595, Langin Cowboy, SY Wolf, Husker Genetics: Pronghorn, Avery, LCS Valiant, SY Grit, Zenda, Crescent Ax, Husker Genetics: Goodstreak, WB4401, LCS Chrome, WB4418, WB4792, Infinity CL, WB4309, LCS Photon Ax, Whistler, Fortify SE, Spur, WB4483, SY Rugged, LCS Mint, SY Sunrise, T158, WB-Cedar, Gaurdian and Husker Genetics: Siege.*

## *Hard White Wheat Top Varieties*

Variety	% 50# Units Sold
SNOWMASS 2.0	52.22%
ASPEN	28.80%
BRECK	12.90%
AP401 CL	5.23%
SNOWMASS	0.85%

*This data was calculated by the Nebraska Wheat Board based on certified seed sales provided by Nebraska Crop Improvement Association (NCIA). For additional information on specific varieties, contact NCIA at 402.472.1444.*



**SY Monument** is broadly adapted with good yields across the area of adaptation. It has white chaff and is a medium-late maturing variety. It is moderately resistant to leaf and stripe rust and is a high tillering wheat with good head size, excellent acid soil tolerance, Soil-Borne Wheat Mosaic Virus resistance, good winter hardiness, and very good test weight patterns. SY Monument can only be sold as a class of certified wheat.

Origin: AgriPro

PVP Status: P-94

Available from 8 certified seed growers in NE.

### ***Agronomic Characteristics***

Maturity: medium late

Winter hardiness: very good

Straw strength: good

Plant height: medium short

Coleoptile length: medium

Bushel weight: very good

Protein content: data N/A

*\*Actual results may vary with season, location, and production conditions.*

### ***Reaction***

Hessian fly: susceptible

Leaf rust: moderately resist

Stem rust: moderately resist

Stripe rust: moderately resist

Soil born mosaic: mod. resist

Wheat streak mosaic: mod. resist

### ***Wheat Data***

Test weight: 61.4 lb/bu

1000 kernel weight: 33.2 gm

Wheat protein (12% mb): 12.3

Wheat ash (12% mb): 1.63

### ***Milling and Flour Quality Data***

Flour yld Miag Multomat Mill: 77.8

Flour yld Quadrumat Sr. Mill: 70.7

Flour moisture (%): 12.8

Flour protein (14% mb): 11.1

Flour ash (14% mb): 0.58

Peak time (min): 6.1

Peak viscosity (RVU): 220.9

Breakdown (RVU): 80.7

Final viscosity at 13 min (RVU): 255.8

Minolta color meter L: 91.06

Minolta color meter a: -1.20

Minolta color meter b: 9.25

PPO: 0.233

Falling number (sec): 395

Damaged starch (AI%): 97.7

Damaged starch (AACC76-31): 7.6

### ***Milling and Flour Quality Data Cont.***

#### **Mixograph**

Flour abs (%as-is): 64.2

Flour abs (14% mb): 62.8

Mix time (min): 7.3

Mix tolerance (0-6): 5

#### **Farinograph**

Flour abs (%as-is): 62.8

Flour abs (14% mb): 61.4

Peak time (min): 2.2

Mix stability (min): 4.9

Mix tolerance index (FU): 41

Breakdown time (min): 4.3

#### **Alveograph**

P(mm) Tenacity: 114

L(mm) Extensibility: 51

G(mm) Swelling index: 15.9

W(10<sup>4</sup> J) Strength (curve area): 247

P/L Curve configuration ratio: 2.23

le(P<sub>200</sub>/P) Elasticity index: 64.1

#### **Extensigraph**

Resist (BU at 45/90.135 min): 507/787/805

Extensibility (mm at 45/90/135 min): 133/120/103

Energy (cm<sup>2</sup> at 45/90/135 min): 121/150/112

Resist<sub>max</sub> (BU at 45/90/135 min): 754/1046/952

Ratio (at 45/90/135 min): 3.8/6.6/7.8

#### **Protein Analysis**

HMW-GS Composition: 2\*,7+9,5+10

TMP/TPP: 0.99

#### **Sedimentation Test**

Volume (ml): 46.9

*\*Milling and Baking data is provided by the 2018 Milling and Baking Test Results for Hard Winter Wheat by the Wheat Quality Council. This information indicates end-use quality typically expected. Results are variable upon the environmental conditions, geographic location and management of the farm where the testing sample originated from.*

**Husker Genetics: Settler CL** is a moderately late maturing, semi-dwarf Hard Red Winter wheat. It is an awned, ivory-glumed cultivar with moderate straw strength. The winter hardiness is good to very good. Settler CL is moderately resistant to stem rust and wheat Soil-Borne Mosaic Virus. It is slightly less susceptible to Fusarium head blight than many widely grown lines. Settler CL is available from NuPride Genetics Network Affiliates. It can only be sold as a class of certified seed.

Origin: Husker Genetics

PVP Status: P-94

Available from 4 certified seed growers in NE.

### ***Agronomic Characteristics***

Maturity: medium

Winter hardiness: good

Straw strength: good

Plant height: short

Coleoptile length: medium

Bushel weight: good

Protein content: good

*\*Actual results may vary with season, location, and production conditions.*

### ***Reaction***

Hessian fly: susceptible

Leaf rust: mod. sus. - mod. resist

Stem rust: moderately resist

Stripe rust: mod. sus. - mod. resist

Soil born mosaic: resistant

Wheat streak mosaic: mod. sus. - mod. resist

### ***Milling and Flour Quality Data Cont.***

#### **Mixograph**

Flour abs (%as-is): 60.3

Mix time (min): 4.1

Mix tolerance (0-6): 3

#### **Farinograph**

Flour abs (%as-is): 55.9

Peak time (min): 6.5

Mix stability (min): 18.5

#### **Alveograph**

P(mm) Tenacity: 60

L(mm) Extensibility: 79

P/L Curve configuration ratio: 0.76

### ***Wheat Data***

Test weight: 58.9 lb/bu

1000 kernel weight: 28.8 gm

Wheat protein (12% mb): 12.2

Wheat ash (12% mb): 1.63

### ***Milling and Flour Quality Data***

Flour yld Miag Multomat Mill: 69.9

Flour yld Quadrumat Sr. Mill: 72.6

Flour moisture (%): 11.4

Flour protein (14% mb): 11.03

Flour ash (14% mb): 0.44

Wet gluten (%): 25.9

Dry gluten (%): 9.5

Gluten index: 98.8

Minolta color meter L: 92.33

Minolta color meter a: -1.47

Minolta color meter b: 8.53

Falling number (sec): 592

*\*Milling and Baking data is provided by the 2008 Milling and Baking Test Results for Hard Winter Wheat by the Wheat Quality Council. This information indicates end-use quality typically expected. Results are variable upon the environmental conditions, geographic location and management of the farm where the testing sample originated from.*

**Husker Genetics: Ruth** is an awned, tan glumed cultivar that is moderately late in maturity. It is a semi-dwarf variety that is approximately 33 inches in height. It has moderate straw strength and good winter hardiness. It is susceptible to barley yellow dwarf viruses and wheat streak mosaic virus. It was developed cooperatively by the Nebraska Agricultural Experiment Station and the USDA-ARS. It can only be sold as a class of certified seed.

Origin: Husker Genetics

PVP Status: Not protected

Available from 12 certified seed growers in NE.

### ***Agronomic Characteristics***

Maturity: medium late

Winter hardiness: good

Straw strength: good

Plant height: medium

Coleoptile length: data N/A

Bushel weight: good

Protein content: good

*\*Actual results may vary with season, location, and production conditions.*

### ***Reaction***

Hessian fly: mod. sus. - mod. resist

Leaf rust: moderately susceptible

Stem rust: moderately resist

Stripe rust: susceptible

Soil born mosaic: resistant

Wheat streak mosaic: susceptible

### ***Wheat Data***

Test weight: 58.3 lb/bu

1000 kernel weight: 29.0 gm

Wheat protein (12% mb): 11.5

Wheat ash (12% mb): 1.64

### ***Milling and Flour Quality Data***

Flour yld Miag Multomat Mill: 74.7

Flour yld Quadrumat Sr. Mill: 68.0

Flour moisture (%): 13.0

Flour protein (14% mb): 10.2

Flour ash (14% mb): 0.53

Peak time (min): 6.2

Peak viscosity (RVU): 218.7

Breakdown (RVU): 82.8

Final viscosity at 13 min (RVU): 244.9

Minolta color meter L: 91.23

Minolta color meter a: -1.23

Minolta color meter b: 8.43

PPO: 0.626

Falling number (sec): 464

Damaged starch (AI%): 95.21

Damaged starch (AACC76-31): 5.67

### ***Milling and Flour Quality Data Cont.***

#### **Mixograph**

Flour abs (%as-is): 60.6

Flour abs (14% mb): 59.4

Mix time (min): 3.9

Mix tolerance (0-6): 4

#### **Farinograph**

Flour abs (%as-is): 56.9

Flour abs (14% mb): 55.7

Development time (min): 6.9

Mix stability (min): 9.3

Mix tolerance index (FU): 33

Breakdown time (min): 11.0

#### **Alveograph**

P(mm) Tenacity: 73

L(mm) Extensibility: 91

G(mm) Swelling index: 21.2

W(10<sup>4</sup> J) Strength (curve area): 228

P/L Curve configuration ratio: 0.80

le(P<sub>200</sub>/P) Elasticity index: 57.3

#### **Extensigraph**

Resist (BU at 45/90/135 min): 313/387/389

Extensibility (mm at 45/90/135 min): 147/154/144

Energy (cm<sup>2</sup> at 45/90/135 min): 83/112/98

Resist<sub>max</sub> (BU at 45/90/135 min): 425/556/515

Ratio (at 45/90/135 min): 2.14/2.51/2.71

#### **Protein Analysis**

HMW-GS Composition: 2\*,1,7+9,5+10

TMP/TPP: 0.82

#### **Sedimentation Test**

Volume (ml): 39.5

*\*Milling and Baking data is provided by the 2015 Milling and Baking Test Results for Hard Winter Wheat by the Wheat Quality Council. This information indicates end-use quality typically expected. Results are variable upon the environmental conditions, geographic location and management of the farm where the testing sample originated from.*



**WB Grainfield** is medium maturing with good winter hardiness. It is medium in height with very good straw strength. It is resistant to leaf rust, moderately resistant to stripe rust and tan spot, and moderately susceptible to powdery mildew and fusarium headblight

Origin: WestBred

PVP Status: P-94

Available from 3 certified seed growers in NE.

### ***Agronomic Characteristics***

Maturity: medium late  
Winter hardiness: very good  
Straw strength: very good  
Plant height: medium  
Coleoptile length: short  
Bushel weight: very good  
Protein content: very good  
*\*Actual results may vary with season, location, and production conditions.*

### ***Reaction***

Hessian fly: susceptible  
Leaf rust: moderately resistant  
Stem rust: moderately resistant  
Stripe rust: mod. sus. - mod. res.  
Soil born mosaic: resistant  
Wheat streak mosaic: susceptible

### ***Wheat Data***

Test weight: 62.2 lb/bu  
1000 kernel weight: 31.3 gm  
Wheat protein (12% mb): 14.4  
Wheat ash (12% mb): 1.03

### ***Milling and Flour Quality Data***

Flour yld Miag Multomat Mill: 74.9  
Flour yld Quadrumat Sr. Mill: 71.7  
Flour moisture (%): 12.5  
Flour protein (14% mb): 13.1  
Flour ash (14% mb): 0.40  
Peak time (min): 5.9  
Peak viscosity (RVU): 205.6  
Breakdown (RVU): 65.4  
Final viscosity at 13 min (RVU): 263.4  
Minolta color meter L: 92.0  
Minolta color meter a: -1.24  
Minolta color meter b: 10.08  
Falling number (sec): 426  
Damaged starch (AI%): 97.01  
Damaged starch (AACC76-31): 7.08

### ***Milling and Flour Quality Data Cont.***

#### **Mixograph**

Flour abs (%as-is): 66.0  
Flour abs (14% mb): 64.3  
Mix time (min): 3.50  
Mix tolerance (0-6): 2

#### **Farinograph**

Flour abs (%as-is): 64.0  
Flour abs (14% mb): 62.3  
Development time (min): 8.9  
Mix stability (min): 15.6  
Mix tolerance index (FU): 17  
Breakdown time (min): 17.7

#### **Alveograph**

P(mm) Tenacity: 92  
L(mm) Extensibility: 96  
G(mm) Swelling index: 21.8  
W(10<sup>4</sup> J) Stength (curve area): 214  
P/L Curve configuration ratio: 0.96  
le(P<sub>200</sub>/P) Elasticity index: 61.6

#### **Extensigraph**

Resist (BU at 45/90/135 min): 295/433/535  
Extensibility (mm at 45/90/135 min): 159/151/159  
Energy (cm<sup>2</sup> at 45/90/135 min): 89/117/159  
Resist<sub>max</sub> (BU at 45/90/135 min): 427/608/794  
Ratio (at 45/90/135 min): 1.86/2.86/3.36

#### **Protein Analysis**

HMW-GS Composition: 2\*,7+9,5+10  
%IPP: 38.88

#### **Sedimentation Test**

Volume (ml): 46.2

*\*Milling and Baking data is provided by the 2012 Milling and Baking Test Results for Hard Winter Wheat by the Wheat Quality Council. This information indicates end-use quality typically expected. Results are variable upon the environmental conditions, geographic location and management of the farm where the testing sample originated from.*



**SY Wolverine** is a medium-early maturity, semi dwarf wheat variety with good yield potential and good straw strength. SY Wolverine has shown above average leaf rust and bacterial leaf disease tolerance. SY Wolverine can only be sold as a class of certified seed.

Origin: AgriPro

PVP Status: P-94

Available from 8 certified seed growers in NE.

### ***Agronomic Characteristics***

Maturity: early medium

Winter hardiness: very good

Straw strength: very good - excellent

Plant height: medium short

Coleoptile length: medium

Bushel weight: very good

*\*Actual results may vary with season, location, and production conditions.*

### ***Reaction***

Hessian fly: susceptible

Leaf rust: resistant

Stem rust: resistant

Stripe rust: moderately susceptible

Soil born mosaic: resistant

Wheat streak mosaic: moderately resist

### ***Wheat Data***

Test weight: 63.5 lb/bu

1000 kernel weight: 32.2 gm

Wheat protein (12% mb): 12.5

Wheat ash (12% mb): 1.62

### ***Milling and Flour Quality Data***

Flour yld Miag Multomat Mill: 77.4

Flour yld Quadrumat Sr. Mill: 71.1

Flour moisture (%): 12.7

Flour protein (14% mb): 11.5

Flour ash (14% mb): 0.56

Peak time (min): 6.1

Peak viscosity (RVU): 198.1

Breakdown (RVU): 69.8

Final viscosity at 13 min (RVU): 237.9

Minolta color meter L: 91.43

Minolta color meter a: -1.50

Minolta color meter b: 9.79

PPO: 0.473

Falling number (sec): 384

Damaged starch (AI%): 97.5

Damaged starch (AACC76-31): 7.5

### ***Milling and Flour Quality Data Cont.***

#### **Mixograph**

Flour abs (%as-is): 62.7

Flour abs (14% mb): 61.4

Mix time (min): 4.3

Mix tolerance (0-6): 4

#### **Farinograph**

Flour abs (%as-is): 61.6

Flour abs (14% mb): 60.3

Development time (min): 10.4

Mix stability (min): 15.7

Mix tolerance index (FU): 23

Breakdown time (min): 18.6

#### **Alveograph**

P(mm) Tenacity: 92

L(mm) Extensibility: 74

G(mm) Swelling index: 19.1

W(10<sup>4</sup> J) Strength (curve area): 255

P/L Curve configuration ratio: 1.24

le(P<sub>200</sub>/P) Elasticity index: 59.2

#### **Extensigraph**

Resist (BU at 45/90.135 min): 300/421/465

Extensibility (mm at 45/90/135 min): 141/127/123

Energy (cm<sup>2</sup> at 45/90/135 min): 74/87/91

Resist<sub>max</sub> (BU at 45/90/135 min): 400/543/591

Ratio (at 45/90/135 min): 2.1/3.3/3.8

#### **Protein Analysis**

HMW-GS Composition: 2\*,7+9,5+10

TMP/TPP: 0.77

#### **Sedimentation Test**

Volume (ml): 36.0

*\*Milling and Baking data is provided by the 2018 Milling and Baking Test Results for Hard Winter Wheat by the Wheat Quality Council. This information indicates end-use quality typically expected. Results are variable upon the environmental conditions, geographic location and management of the farm where the testing sample originated from.*

**Brawl CL Plus** is an awned, white glumed, Hard Red Winter wheat. It is medium-tall, early maturing and has excellent straw strength. It has a medium-long coleoptile and excellent test weight and baking and milling qualities. The non-transgenic herbicide tolerance in Brawl CL Plus was developed by BASF. It is a wheat to be used as a component of the BASF CLEARFIELD Production System. Brawl can only be sold as a class of certified seed.

Origin: Colorado Wheat      PVP Status: P-94      Available from 5 certified seed growers in NE.

### ***Agronomic Characteristics***

Maturity: early  
Winter hardiness: good  
Straw strength: very good  
Plant height: medium tall  
Coleoptile length: medium long  
Bushel weight: very good  
Protein content: good  
*\*Actual results may vary with season, location, and production conditions.*

### ***Reaction***

Hessian fly: susceptible  
Leaf rust: moderately susceptible  
Stem rust: moderately susceptible  
Stripe rust: susceptible  
Soil born mosaic: mod. resistant  
Wheat streak mosaic: mod. sus.

### ***Wheat Data***

Test weight: 60.2 lb/bu  
1000 kernel weight: 25.4 gm  
Wheat protein (12% mb): 13.0  
Wheat ash (12% mb): 1.48

### ***Milling and Flour Quality Data***

Flour yld Miag Multomat Mill: 76.5  
Flour yld Quadrumat Sr. Mill: 71.7  
Flour moisture (%): 10.7  
Flour protein (14% mb): 11.8  
Flour ash (14% mb): 0.44  
Peak time (min): 6.3  
Peak viscosity (RVU): 240.6  
Breakdown (RVU): 70.4  
Final viscosity at 13 min (RVU): 297.7  
Minolta color meter L: 92.4  
Minolta color meter a: -2.04  
Minolta color meter b: 10.4  
Falling number (sec): 468  
Damaged starch (AI%): 94.87  
Damaged starch (AACC76-31): 5.43

### ***Milling and Flour Quality Data Cont.***

#### **Mixograph**

Flour abs (%as-is): 65.4  
Flour abs (14% mb): 61.7  
Mix time (min): 4.63  
Mix tolerance (0-6): 4

#### **Farinograph**

Flour abs (%as-is): 59.8  
Flour abs (14% mb): 56.1  
Development time (min): 7.2  
Mix stability (min): 23.8  
Mix tolerance index (FU): 10  
Breakdown time (min): 20.5

#### **Alveograph**

P(mm) Tenacity: 69  
L(mm) Extensibility: 107  
G(mm) Swelling index: 23.0  
W(10<sup>4</sup> J) Stength (curve area): 272  
P/L Curve configuration ratio: 0.64  
le(P<sub>200</sub>/P) Elasticity index: 65.1

#### **Extensigraph**

Resist (BU at 45/90.135 min): 460/902/992  
Extensibility (mm at 45/90/135 min): 130/112/92  
Energy (cm<sup>2</sup> at 45/90/135 min): 157/160/130  
Resist<sub>max</sub> (BU at 45/90/135 min): 977/985/997  
Ratio (at 45/90/135 min): 5.4/8.8/10.9

#### **Protein Analysis**

HMW-GS Composition: 2\*,7+8,5+10

#### **Sedimentation Test**

Volume (ml): 63.6

*\*Milling and Baking data is provided by the 2011 Milling and Baking Test Results for Hard Winter Wheat by the Wheat Quality Council. This information indicates end-use quality typically expected. Results are variable upon the environmental conditions, geographic location and management of the farm where the testing sample originated from.*

# Nebraska Wheat Overview

Nebraska wheat acres planted dropped another 10% this year with USDA reporting 810,000 acres that were seeded in the fall of 2020 for harvest in 2021. This is after last years record low planted acres of 920,000. Hard White (HW) wheat accounts for 35,500 of the 810,000 acres with the rest being comprised of Hard Red Winter (HRW) varieties. This spring producers will also be planting an additional 10,000 acres in Hard Red Spring (HRS) wheat.

About 15% of the wheat planted in Nebraska is under irrigation while the other 85% remains dryland. It is also becoming more common for producers to incorporate other crops into their rotations. Instead of wheat being a primary crop in western Nebraska, many acres are starting to plant drought tolerant corn. This has been the major reason for wheat acreage loss.

Hard White wheat production that takes place in Nebraska is primarily under contract with Ardent Mills. PlainsGold's Snowmass2.0 topped the charts this production season with over 50% of the HW acres being planted to it. There was a slight uptick in HW acres planted this year, an additional 5,500 took the total up from last years 30,000 acres to 35,500.

Producers began introducing HRS wheat into their rotations a few years ago. Last years drought-like conditions reduced yield potential substantially. However, it is hard to determine if it will be promising in the future if you base its performance after one trial year. Many producers are eager to get it in the ground again and determine the benefits it can have on their farms.

This years top spring varieties to be planted are:

1. WB 9719
2. LCS Cannon
3. South Dakota State Surpass
4. AP Murdock

The wheat production landscape is ever-changing across Nebraska. The University of Nebraska-Lincoln Small Grains Breeding Program works hard to stay ahead of the curve and produce varieties that will benefit the Nebraska wheat grower. Dr. Stephen Baenziger will be retiring in April of 2021, but his replacement Dr. Katherine Frels is overlapping her start date with his retirement date to ensure the program continues without missing a beat. Dr. Frels looks forward to working with and for the Nebraska producer.

*The mission of NWB is to increase both domestic and foreign consumption of wheat and wheat food products through marketing and research, as well as to help develop and maintain both domestic and export markets for the Nebraska wheat producer.*

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