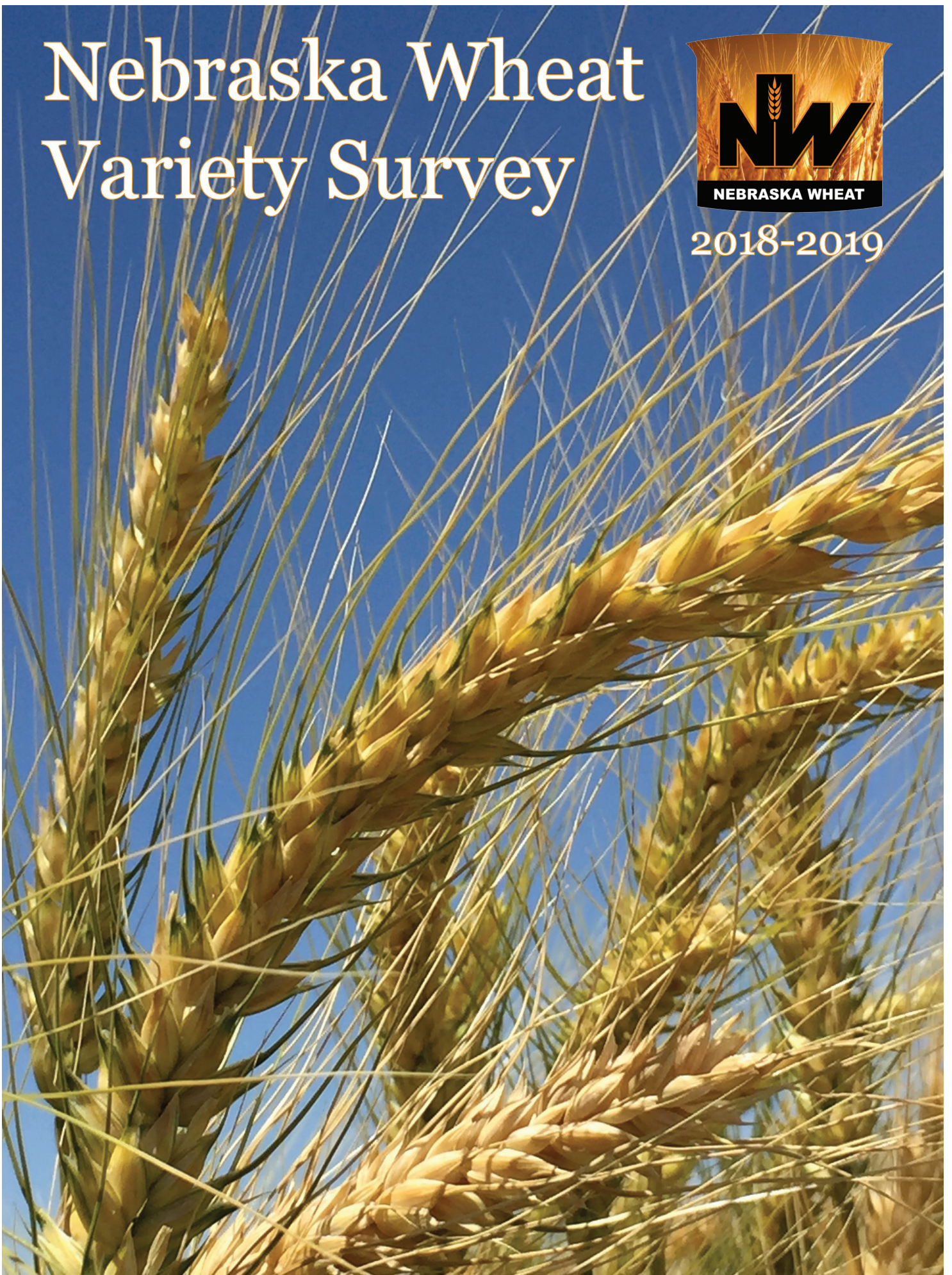


# Nebraska Wheat Variety Survey



2018-2019





## **Variety Survey Data**

- SY Monument was the top selling wheat seed in 2018-2019, making it the top selling variety for three years in a row.
- Nebraska producers planted 46 varieties.
- The top 22 varieties accounted for 90.82 percent of seed sales.
- Seven of the top 22 varieties were released by Husker Genetics. These varieties accounted for 31.15 percent of seed sales.
- Ten of the top 22 varieties were released by private companies. These varieties accounted for 46.86 percent of seed sales.
- Five of the top 22 varieties were released by other public institutions. These varieties accounted for 12.81 percent of seed sales.

## **Variety Survey Methodology**

Results of this survey are based on certified seed sales of Hard Red Winter wheat reported for the state of Nebraska. Certified Seed accounted for 68 percent of Nebraska's wheat planting in the fall of 2018. Data included in these pages is provided by the Nebraska Crop Improvement Association, Husker Genetics, and the Wheat Quality Council.

## **Hard White Wheat**







The majority of white wheat grown in Nebraska is done so under a direct contract. However, the top five Hard White wheat varieties planted in the fall of 2018 included: Breckenridge, Snowmass, Aspen, Sunshine, and Nugrain.

## **Future Variety Potential**

Currently, NWB is supporting research into Hard Red Winter, Soft Red Winter, Hard White, Hard Red Spring and hybrid wheat varieties that may be adaptable to planting in Nebraska.

## **About NWB**

The Nebraska Wheat Board (NWB) was formed in 1955 after the Nebraska Wheat Resources Act was passed. All NWB policies are established by a seven-member board of directors composed of wheat producers from Nebraska who are appointed by the Governor. Each bushel of wheat marketed in the state is assessed an excise tax of four-tenths of one percent (0.4%) of net value at the point of first sale. These monies are deposited into the State Treasury and are used by NWB to advance Nebraska's wheat industry. The board of directors oversees all expenditures. Funding proposals in each area are submitted on an annual basis, regardless of whether the project or organization was funded previously. The board completes two readings of the proposals and determines which will receive funds during the annual budget meeting held in May or June. Funds are invested in five areas as directed by the Nebraska Wheat Resources Act: international marketing, domestic marketing, research, federal farm policy, and education and promotion.

Variety	%, 50# bu. sold
SY Monument	14.8
SY Wolf	8.18
Husker Genetics Ruth Brand 	7.96
WB Grainfield	7.79
Settler CL 	6.87
Husker Genetics Robidoux Brand 	5.87
Brawl CL Plus	5.67
Husker Genetics Freeman Brand 	3.98
LCS Link	3.58
AP503 CL2	3.22
SY Sunrise	2.91
Husker Genetics Overland Brand 	2.87
Winterhawk	2.63
Paradise	2.21
Zenda	1.98
Wesley	1.84
Infinity CL 	1.76
Avery	1.55
SY Rugged	1.44
TAM 111	1.4
Longbranch	1.3
T158	1.01

*Variety sales reported but comprising less than 1% individually include: Camelot, LCS Chrome, Goodstreak, Cowboy, WB4948, Byrd, WB4462, SY Achieve, LCS Fusion AX, Everest, Pronghorn, LCS Mint, WB4458, Spur, WB Cedar, Denali, Husker Genetics Panhandle Brand, Langin, SY Legend, WB4269, LCS Avenger, Jagalene, SY Grit, WB4721.*

TOP VARIETIES

# SY MONUMENT

## Variety Overview

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 has moderate resistance to leaf and stripe rust and is a high tillering wheat with good head sized, excellent acid soil tolerance, Soilborne Wheat Mosaic Virus resistance, good winter hardiness, and very good test weight patterns. SY Monument can only be sold as a class of certified seed.

Origin: AgriPro  
PVP Status: P-94

Available from 10 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 NA  
*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 Borne Mosaic: Mod. Resist  
Wheat Streak Mosaic: Mod. Resist

### Wheat Data

Test Weight: 63.8 lb/bu  
1000 kernel weight: 32.5 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: 6.1 minutes  
Peak Viscosity: 220.9 RVU  
Breakdown: 80.7 RVU  
Final Viscosity@13 min: 255.8 RVU  
Minolta color meter L: 91.06  
Minolta color meter a: -1.2  
Minolta color meter b: 9.25  
PPO: 0.233  
Falling number: 395 sec  
Damaged Starch (AI %): 97.7  
Damaged Starch (AACC76-31): 7.6

### Milling and Flour Quality Data Continued

#### MIXOGRAPH

Flour Abs (% as-is): 64.2  
Flour Abs (14% m) 62.8  
Mix Time: 7.3 min  
Mix Tolerance (0-6): 5

#### FARINOGRAPH

Flour Abs (% as-is): 62.8  
Flour Abs (14% mb): 61.4  
Peak Time: 2.2 min  
Mix stability: 4.9 min  
Mix Tolerance Index (FU) 41  
Breakdown Time: 4.3 min

#### ALVEOGRAPH

P(mm) Tenacity: 114  
L(mm) Extensibility: 51  
G(mm) Swelling Index: 15.9  
W(10<sup>-4</sup>J) strenght (curve area): 247  
P/L curve configuration ratio: 2.23  
le(P<sub>200</sub>/P) eslasticity index: 64.1

#### EXTENSIGRAPH

Resist (BU at 45/90/135 min): 507/787/805  
Extensibility (mm at 45/90/125 min): 133/120/103  
Energy (cm<sup>2</sup> at 45/90/135): 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: 46.9 ml

## Variety Overview

SY Wolf is a semi-dwarf hard red wheat variety with excellent straw strength and medium in maturity. It has very good test weight, straw strength and winterhardiness. It was developed, produced, and marketed exclusively under the AgriPro brand name. SY Wolf can only be sold as a class of certified seed.

Available from 7 certified seed growers in NE.

Origin: AgriPro  
PVP Status: P-94

### Milling and Flour Quality Data Continued

#### MIXOGRAPH

Flour Abs (% as-is): 65  
Flour Abs (14% m) 62.9  
Mix Time: 5.25 min  
Mix Tolerance (0-6): 4

#### FARINOGRAPH

Flour Abs (% as-is): 62.6  
Flour Abs (14% mb): 60.4  
Development time: 10.3 min  
Mix stability: 16.6 min  
Mix Tolerance Index (FU): 14  
Breakdown Time: 18.1 min

#### ALVEOGRAPH

P(mm) Tenacity: 101  
L(mm) Extensibility: 71  
G(mm) Swelling Index: 18.8  
W( $10^{-4}$  J) strength (curve area): 285  
P/L curve configuration ratio: 1.42  
le( $P_{200}/P$ ) elasticity index: 63.9

#### EXTENSIGRAPH

Resist (BU at 45/90/135 min): 338/724/879  
Extensibility (mm at 45/90/125 min): 130/107/96  
Energy ( $\text{cm}^2$  at 45/90/135): 72/110/105  
Resist<sub>max</sub> (BU at 45/90/135 min): 420/818/900  
Ratio (at 45/90/135 min): 2.6/6.74/9.15

#### PROTEIN ANALYSIS

HMW-GS Composition: 1/2\*, 7+9, 5+10  
%IPP: 42.5

#### SEDIMENTATION TEST

Volume: 36.2 ml

### Agronomic Characteristics

Maturity: Medium  
Winter Hardiness: Good  
Straw Strength: Very Good  
Plant Height: Medium Short  
Coleoptile Length: Medium  
Bushel Weight: Very Good  
Protein Content: Good  
*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 Borne Mosaic: Mod. Resist  
Wheat Streak Mosaic: Susceptible

#### Wheat Data

Test Weight: 61.8 lb/bu  
1000 kernel weight: 35.6 gm  
Wheat Protein (12% mb): 14.1  
Wheat Ash (12% mb) 1.51

### Milling and Flour Quality Data

Flour Yld Miag Multomat Mill: 74.6  
Flour Yld Quadrumat Sr. Mill: 72.2  
Flour Moisture (%): 12.1  
Flour Protein (14% mb) 12.3  
Flour Ash (14% mb) 0.52  
Peak Time: 6.1 minutes  
Peak Viscosity: 197.8 RVU  
Breakdown: 69.5 RVU  
Final Viscosity@13 min: 244 RVU  
Minolta color meter L: 91.5  
Minolta color meter a: -0.92  
Minolta color meter b: 9.65  
Falling number: 501 sec  
Damaged Starch (AI %): 95.82  
Damaged Starch (AACC76-31): 6.13

S  
Y  
  
W  
O  
L  
F

# RUTH

## Variety Overview

Husker Genetics Ruth Brand is an awned, tan glumed cultivar that is moderately late in maturity. It's a semi-dwarf variety, approximately 33 inches in height. It has moderate straw strength and good winter hardiness. Ruth is resistant to Soilborne Wheat Mosaic Virus and moderately resistant to stem rust. 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: P-94

Available from 13 certified seed growers in NE.

### Agronomic Characteristics

Maturity: Medium Late  
Winter Hardiness: Good  
Straw Strength: Good  
Plant Height: Medium  
Coleoptile Length: Data NA  
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 Borne Mosaic: Resistant  
Wheat Streak Mosaic: Susceptible

### Wheat Data

Test Weight: 58.3 lb/bu  
1000 kernel weight: 29 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  
Flour Moisture (%): 13  
Flour Protein (14% mb) 10.2  
Flour Ash (14% mb) 0.53  
Peak Time: 6.2 minutes  
Peak Viscosity: 218.7 RVU  
Breakdown: 82.8 RVU  
Final Viscosity@13 min: 244.9 RVU  
Minolta color meter L: 91.23  
Minolta color meter a: -1.23  
Minolta color meter b: 8.43  
PPO: 0.626  
Falling number: 464 sec  
Damaged Starch (AI %): 95.2  
Damaged Starch (AACC76-31): 5.67

### Milling and Flour Quality Data Continued

#### MIXOGRAPH

Flour Abs (% as-is): 60.6  
Flour Abs (14% m) 59.4  
Mix Time: 3.9 min  
Mix Tolerance (0-6): 4

#### FARINOGRAPH

Flour Abs (% as-is): 56.9  
Flour Abs (14% mb): 55.7  
Development Time: 6.9 min  
Mix stability: 9.3 min  
Mix Tolerance Index (FU) 33  
Breakdown Time: 11 min

#### ALVEOGRAPH

P(mm) Tenacity: 73  
L(mm) Extensibility: 91  
G(mm) Swelling Index: 21.2  
W(10<sup>-4</sup>J) strenght (curve area): 228  
P/L curve configuration ratio: 0.8  
le(P<sub>200</sub>/P) eslasticity index: 57.3

#### EXTENSIGRAPH

Resist (BU at 45/90/135 min): 313/387/389  
Extensibility (mm at 45/90/125 min): 147/154/144  
Energy (cm<sup>2</sup> at 45/90/135): 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  
%IPP: 48.62

#### SEDIMENTATION TEST

Volume: 39.5 ml

## Variety Overview

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 head blight. It can only be sold as a class of certified seed.

Available from 5 certified seed growers in NE.

Origin: WestBred

PVP Status: P-94

### Milling and Flour Quality Data Continued

#### MIXOGRAPH

Flour Abs (% as-is): 66

Flour Abs (14% m) 64.3

Mix Time: 3.5 min

Mix Tolerance (0-6): 2

#### FARINOGRAPH

Flour Abs (% as-is): 64

Flour Abs (14% mb): 62.3

Development time: 8.9 min

Mix stability: 15.6 min

Mix Tolerance Index (FU): 17

Breakdown Time: 17.7 min

#### ALVEOGRAPH

P(mm) Tenacity: 92

L(mm) Extensibility: 96

G(mm) Swelling Index: 21.8

W( $10^{-4}$  J) strength (curve area): 314

P/L curve configuration ratio: 0.96

le( $P_{200}/P$ ) elasticity index: 61.6

#### EXTENSIGRAPH

Resist (BU at 45/90/135 min): 295/433/535

Extensibility (mm at 45/90/125 min): 159/151/159

Energy ( $\text{cm}^2$  at 45/90/135): 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: 46.2 ml

### 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 Resist

Stem Rust: Data NA

Stripe Rust: Mod.Sus.-Mod.Resist

Soil Borne 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) 0.4

Peak Time: 5.9 minutes

Peak Viscosity: 205.6 RVU

Breakdown: 65.4 RVU

Final Viscosity@13 min: 263.4 RVU

Minolta color meter L: 92

Minolta color meter a: -1.24

Minolta color meter b: 10.08

Falling number: 426 sec

Damaged Starch (AI %): 97.01

Damaged Starch (AACC76-31): 7.08

WB  
GRAIN  
FIELD



# SETTLER CL

## Variety Overview

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 soilborne 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 7 certified seed growers in NE.

### Agronomic Characteristics

Maturity: Medium Late  
Winter Hardiness: Good  
Straw Strength: Good  
Plant Height: Medium  
Coleoptile Length: Data NA  
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 Borne Mosaic: Resistant  
Wheat Streak Mosaic: Susceptible

### 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  
Peak Time: 6.2 minutes  
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: 592 sec

### Milling and Flour Quality Data Continued

#### MIXOGRAPH

Flour Abs: 60.3%  
Mix Time: 4.1min  
Mix Tolerance (0-6): 3

#### FARINOGRAPH

Flour Abs: 55.9%  
Peak Time: 6.5 min  
Mix stability: 18.5 min

#### ALVEOGRAPH

P(mm) Tenacity: 60  
L(mm) Extensibility: 79  
P/L curve configuration ratio: 0.76



## Variety Overview

Husker Genetics Robidoux Brand was co-developed by the University of Nebraska and the USDA-ARS. is moderately late in maturity and is best adapted to western rainfed areas where drought is common and irrigated production sites. It is moderately resistant to stripe rust and moderately resistant to moderately susceptible to stem rust. Non-complementary varieties include Millenium and Wahoo. It can only be sold as a class of certified seed.

Available from 7 certified seed growers in NE.

Origin: Husker Genetics

PVP Status: P-94

### Milling and Flour Quality Data Continued

#### MIXOGRAPH

Flour Abs (% as-is): 65.1

Flour Abs (14% m) 64.6

Mix Time: 2.9 min

Mix Tolerance (0-6): 2

#### FARINOGRAPH

Flour Abs (% as-is): 60.7

Flour Abs (14% mb): 60.2

Peak time: 5.2 min

Mix stability: 10 min

Mix Tolerance Index (FU): 20

Breakdown Time: 12.5 min

#### ALVEOGRAPH

P(mm) Tenacity: 67

L(mm) Extensibility: 121

G(mm) Swelling Index: 24.5

W( $10^{-4}$ J) strenght (curve area): 246

P/L curve configuration ratio: 0.55

le( $P_{200}/P$ ) eslasticity index: 56.1

#### EXTENSIGRAPH

Resist (BU at 45/90/135 min): 247/289/287

Extensibility (mm at 45/90/125 min): 157/168/163

Energy ( $\text{cm}^2$  at 45/90/135): 71/96/90

Resist<sub>max</sub> (BU at 45/90/135 min): 337/430/426

Ratio (at 45/90/135 min): 1.6/1.7/1.8

#### PROTEIN ANALYSIS

HMW-GS Composition: 2\*, 2+12, 7+9

TMP/TPP: 0.85

#### SEDIMENTATION TEST

Volume: 46.3 ml

### Agronomic Characteristics

Maturity: Medium Early

Winter Hardiness: Good

Straw Strength: Good

Plant Height: Medium

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: Moderately Susceptible

Stem Rust: Moderately Resistant

Stripe Rust: Moderately Resistant

Soil Borne Mosaic: Resistant

Wheat Streak Mosaic: Susceptible

### Wheat Data

Test Weight: 56.8 lb/bu

1000 kernel weight: 28.8gm

Wheat Protein (12% mb): 13.5

Wheat Ash (12% mb) 1.69

### Milling and Flour Quality Data

Flour Yld Miag Multomat Mill: 73

Flour Yld Quadrumat Sr. Mill: 66.2

Flour Moisture (%): 13.3

Flour Protein (14% mb) 12

Flour Ash (14% mb) 0.51

Peak Time: 6.3 minutes

Peak Viscosity: 189 RVU

Breakdown: 60.5 RVU

Final Viscosity@13 min: 239.3 RVU

Minolta color meter L: 91.3

Minolta color meter a: -1.45

Minolta color meter b: 8.42

PPO: 0.613

Falling number: 387 sec

Damaged Starch (AI %): 95.3

Damaged Starch (AACC76-31): 5.7

ROBIDOUX

# B R A W L C L P L U S

## Variety Overview

Brawl CL Plus (Brawl) is an awned, white-glumed, hard red winter wheat. It is a 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 6 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 Borne Mosaic: Mod. Resist  
Wheat Streak Mosaic: Mod. Sus.

### Wheat Data

Test Weight: 60.2 lb/bu  
1000 kernel weight: 25.4 gm  
Wheat Protein (12% mb): 13  
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: 6.3 minutes  
Peak Viscosity: 240.6 RVU  
Breakdown: 70.4 RVU  
Final Viscosity@13 min: 297.7 RVU  
Minolta color meter L: 92.4  
Minolta color meter a: -2.04  
Minolta color meter b: 10.4  
Falling number: 468 sec  
Damaged Starch (AI %): 95.2  
Damaged Starch (AACC76-31): 5.67

### Milling and Flour Quality Data Continued

#### MIXOGRAPH

Flour Abs (% as-is): 60.6  
Flour Abs (14% m) 59.4  
Mix Time: 3.9 min  
Mix Tolerance (0-6): 4

#### FARINOGRAPH

Flour Abs (% as-is): 56.9  
Flour Abs (14% mb): 55.7  
Development Time: 6.9 min  
Mix stability: 9.3 min  
Mix Tolerance Index (FU) 33  
Breakdown Time: 11 min

#### ALVEOGRAPH

P(mm) Tenacity: 73  
L(mm) Extensibility: 91  
G(mm) Swelling Index: 21.2  
W(10<sup>-4</sup>J) strenght (curve area): 228  
P/L curve configuration ratio: 0.8  
le(P<sub>200</sub>/P) eslasticity index: 57.3

#### EXTENSIGRAPH

Resist (BU at 45/90/135 min): 313/387/389  
Extensibility (mm at 45/90/125 min): 147/154/144  
Energy (cm<sup>2</sup> at 45/90/135): 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  
%IPP: 48.62

#### SEDIMENTATION TEST

Volume: 39.5 ml

## Variety Overview

Husker Genetics Freeman Brand is a semi-dwarf wheat moderately early in maturity and approximate mature plant height of 34 inches. It has moderate straw strength and good winter hardiness. It is resistant to Soilborne Wheat 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.

Available from 11 certified seed growers in NE.

Origin: Husker Genetics

PVP Status: P-94

### Milling and Flour Quality Data Continued

#### MIXOGRAPH

Flour Abs (% as-is): 64.5

Flour Abs (14% m) 60.6

Mix Time: 3.5 min

Mix Tolerance (0-6): 3

#### FARINOGRAPH

Flour Abs (% as-is): 61.6

Flour Abs (14% mb): 58.2

Peak time: 5.5 min

Mix stability: 14.8 min

Mix Tolerance Index (FU): 28

Breakdown Time: 10.6 min

#### ALVEOGRAPH

P(mm) Tenacity: 75

L(mm) Extensibility: 106

G(mm) Swelling Index: 22.9

W( $10^{-4}$  J) strength (curve area): 236

P/L curve configuration ratio: 0.71

le( $P_{200}/P$ ) elasticity index: 51.3

#### EXTENSIGRAPH

Resist (BU at 45/90/135 min): 278/348/369

Extensibility (mm at 45/90/125 min): 159/176/166

Energy ( $\text{cm}^2$  at 45/90/135): 82/119/122

Resist<sub>max</sub> (BU at 45/90/135 min): 382/511/566

Ratio (at 45/90/135 min): 1.75/1.98/2.23

#### PROTEIN ANALYSIS

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

%IPP: 42.73

#### SEDIMENTATION TEST

Volume: 50.1 ml

### Agronomic Characteristics

Maturity: Medium Early

Winter Hardiness: Good

Straw Strength: Good

Plant Height: Short

Coleoptile Length: Short

Bushel Weight: 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 Resistant

Stripe Rust: Moderately Susceptible

Soil Borne Mosaic: Resistant

Wheat Streak Mosaic: Susceptible

### Wheat Data

Test Weight: 58.8 lb/bu

1000 kernel weight: 28 gm

Wheat Protein (12% mb): 12.2

Wheat Ash (12% mb) 1.32

### Milling and Flour Quality Data

Flour Yld Miag Multomat Mill: 74.8

Flour Yld Quadrumat Sr. Mill: 68.9

Flour Moisture (%): 9.9

Flour Protein (14% mb) 11.1

Flour Ash (14% mb) 0.6

Peak Time: 6.1 minutes

Peak Viscosity: 224.3 RVU

Breakdown: 81.8 RVU

Final Viscosity@13 min: 262.4 RVU

Minolta color meter L: 91.3

Minolta color meter a: -0.9

Minolta color meter b: 9.46

PPO: 0.59

Falling number: 501 sec

Damaged Starch (AI %): 96.24

Damaged Starch (AACC76-31): 6.46

F  
R  
E  
E  
M  
A  
N





## **Nebraska Crop Improvement Association**

The Nebraska Crop Improvement Association, is a recognized authority for seed production, performance, and quality analysis. Operating as an independent, unbiased non-profit organization, the NCIA enhances the value of seed and crops through professional, personalized services that meet seed producer, marketer, and industry needs. NCIA programs contribute to agricultural diversity, productivity, and sustainability. NCIA is dedicated to enhancing the economic viability and well-being of the people of Nebraska and the world through value-added products and processes.

**Steve Knox, Director**  
**268 Plant Science Hall**  
**PO Box 830911**  
**Lincoln, NE 68583**  
**Phone: 402-472-1444**  
**Fax: 402-472-8654**  
**[www.necrop.org](http://www.necrop.org)**  
**[sknox2@unl.edu](mailto:sknox2@unl.edu)**



## **Wheat Quality Council**

The Wheat Quality Council is an organization that oversees a coordinated effort by breeders, producers and processors to improve wheat and flour quality through the evaluation and testing of new wheat varieties. WQC is a membership organization. Members include millers, bakers/processors, allied companies, grain traders, seed firms, state wheat organizations, and professional organizations.

**Dave Green, Executive Director**  
**PO Box 19529**  
**Lenexa, KS 66285**  
**Phone: 913-634-0248**  
**[www.wheatqualitycouncil.org](http://www.wheatqualitycouncil.org)**  
**[dave.green.wqc@gmail.com](mailto:dave.green.wqc@gmail.com)**