



# K-STATE

Research and Extension

## South-Central Kansas Replicated Wheat Variety Tests 2024

Andale, Clearwater, Haysville, Newton, Belle Plaine, Caldwell

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# SC KS Wheat Plots - Yield

(bushels/acre)

Variety	Source	All	Andale	Clearwater	Haysville	Newton	Belle Plaine	Caldwell
Rock Star	Polansky	75.4	78.7	72.4	85.3	94.4	74.6	47.1
KS Providence	KWA	74.8	77.5	68.7	80.8	98.3	73.7	50.0
KS Bill Snyder	KWA	73.6	74.3	69.8	78.5	100.5	72.3	45.9
WB4523	WestBred	73.4	77.1	71.5	74.1	91.0	80.3	45.8
LCS Atomic AX	LCS	73.4	79.2	63.4	84.9	99.3	64.9	48.6
AP Prolific	AgriPro	73.0	76.7	67.6	76.2	97.4	68.0	52.1
LCS Helix AX	LCS	71.3	84.2	71.9	77.4	84.2	61.9	48.5
WB4699	WestBred	70.6	76.5	64.4	62.8	100.6	77.6	41.5
AP24 AX	AgriPro	70.4	81.3	65.7	66.3	85.2	71.4	52.3
High Cotton	OGI	69.9	72.5	75.5	72.6	91.8	58.4	48.4
LCS Warbird AX	LCS	69.4	75.0	68.9	69.1	91.2	61.8	50.5
WB4422	WestBred	69.2	82.1	60.2	61.6	87.9	73.2	50.5
KS Ahearn	KWA	69.0	78.4	68.6	61.0	88.6	70.1	44.6
AP18 AX	AgriPro	68.8	74.7	57.6	78.2	86.4	65.2	50.4
Showdown	OGI	68.5	78.7	71.9	70.7	79.0	58.1	52.7
Bob Dole	AgriPro	68.3	71.0	66.7	69.8	85.1	68.5	49.0
KS Mako	KWA	67.6	67.0	70.5	64.1	93.3	64.9	46.7
AM Cartwright	AgriMaxx	67.5	70.2	66.6	69.5	92.2	65.5	40.8
Kivari AX	PlainsGold	67.0	76.6	62.7	60.3	76.0	73.9	52.6
WB4401	WestBred	67.0	68.2	62.7	64.1	85.2	77.7	44.2
LCS Steel AX	LCS	66.8	83.1	49.5	53.0	97.7	67.9	49.9
Gallagher	OGI	66.6	71.2	62.8	60.3	86.1	71.4	47.9
Canvas	PlainsGold	66.5	77.4	60.6	63.1	89.9	61.5	46.3
KS Hatchett	KWA	66.0	72.6	61.3	64.8	83.7	66.0	47.0
Strad CL+	OGI	64.7	65.6	61.2	79.7	83.5	56.8	41.3
AG Radical	AGSECO	63.7	82.0	60.7	49.0	72.4	69.8	47.4
LCS Runner	LCS	62.1	69.8	60.4	50.7	81.9	58.6	50.2
Doublestop CL+	OGI	61.6	68.6	60.0	60.5	84.9	51.2	44.6
Average		68.8	75.4	65.1	68.2	88.8	67.3	47.7
Max		75.4	84.2	75.5	85.3	100.6	80.3	52.7
Min		61.6	65.6	49.5	49.0	72.4	51.2	40.8

\*Values, highlighted in gray and bold, belong statistically to the highest test weight group. We cannot say values within the group are different from each other

# Plot Information

## Andale

**Planted:** 10/18/2023

**Harvested:** 6/14/2024

**Planting Rate:** 1.2 million seeds/ac

**Tillage:** Conventional

**Previous Crop:** Wheat

**Fertilizer:** (per acre)

Pre-Plant

- 50 lbs N, 30 lbs P, 15 lbs K, 2 lbs Zn

Planting

- 8 gal 10-34-0

Topdress

- 30 lbs N + 6 lbs S

**Fungicide:** Yes

## Clearwater

**Planted:** 10/18/2023

**Harvested:** 6/14/2024

**Planting Rate:** 1.2 million seeds/ac

**Tillage:** No-Till

**Previous Crop:** Corn

**Fertilizer:** (per acre)

Planting

- 9 gal 10-34-0

Topdress

- 34 gal 28% + 1 gal ATS

**Fungicide:** No

## Haysville

**Planted:** 10/23/2023

**Harvested:** 6/12/2024

**Planting Rate:** 1.2 million seeds/ac

**Tillage:** Reduced Till

**Previous Crop:** Cover Crop

**Fertilizer:** (per acre)

Pre-Plant

- 8 gal 10-34-0

Topdress

- 45 lbs 46-0-0

**Fungicide:** No

## Newton

**Planted:** 10/18/2023

**Harvested:** 6/17/2024

**Planting Rate:** 1.2 million seeds/ac

**Tillage:** No-Till

**Previous Crop:** Corn

**Fungicide:** Yes

# Plot Information

## Belle Plaine

**Planted:** 10/19/2023

**Harvested:** 6/12/2024

**Planting Rate:** 1.2 million seeds/ac

**Tillage:** No-Till

**Previous Crop:** Corn

**Fertilizer:** (per acre)

Pre-Plant

- 60 lbs N

Planting

- 9 gal 10-34-0

Topdress

- 55 lbs N

**Fungicide:** Yes

## Caldwell

**Planted:** 10/19/2023

**Harvested:** 6/10/2024

**Planting Rate:** 1.2 million seeds/ac

**Tillage:** Conventional

**Previous Crop:** Sorghum

**Fertilizer:** (per acre)

Planting

- 8 gal/ac 10-34-0

Topdress (2/28)

- 60 lbs UAN

Topdress (4/9)

- 45 lbs UAN

**Fungicide:** Yes

# Andale Wheat Plot Soil Test

Andale 0-6" / 0-24"  
Sampled: 11/13/2023

<i>Analysis</i>	<i>Value Found</i>	<i>Analysis</i>	<i>Value Found</i>
Soil pH (1:1, soil:water)	5.6	Buffer pH (Sikora)	6.8
Organic Matter (LOI), %	1.9%	Nitrate-N sub-surface	10 ppm
Phosphorus (P) Mehlich-3	44 ppm	Potassium (K)	201 ppm
Zinc (Zn) DTPA Extraction	1.0 ppm	Calcium (Ca)	1728 ppm
Magnesium (Mg)	233 ppm	Sodium (Na)	14 ppm
Aluminum (Al)	0.1 ppm	Sulfur (S) sub-surface	3 ppm
Chloride (Cl) sub-surface	8 ppm	Cation Exch. Capacity (Summation)	16.2 meq/100g

# Clearwater Wheat Plot Soil Test

Clearwater 0-6" / 0-24"  
Sampled: 11/13/2023

<i>Analysis</i>	<i>Value Found</i>	<i>Analysis</i>	<i>Value Found</i>
Soil pH (1:1, soil:water)	6.2	Buffer pH (Sikora)	6.9
Organic Matter (LOI), %	2.3%	Nitrate-N sub-surface	1 ppm
Phosphorus (P) Mehlich-3	22 ppm	Potassium (K)	177 ppm
Zinc (Zn) DTPA Extraction	1.4 ppm	Calcium (Ca)	1601 ppm
Magnesium (Mg)	260 ppm	Sodium (Na)	14 ppm
Aluminum (Al)	0.1 ppm	Sulfur (S) sub-surface	2 ppm
Chloride (Cl) sub-surface	9 ppm	Cation Exch. Capacity (Summation)	15.0 meq/100g

# Haysville Wheat Plot Soil Test

Haysville 2-8"

<i>Analysis</i>	<i>Value Found</i>	<i>Analysis</i>	<i>Value Found</i>
Soil pH (1:1, soil:water)	6.4	Nitrate-N	27.9 ppm
Organic Matter (LOI), %	1.3%	Potassium (K)	143 ppm
Phosphorus (P) Mehlich-3	35 ppm	Calcium (Ca)	1687 ppm
Zinc (Zn) DTPA Extraction	0.7 ppm	Sodium (Na)	25 ppm
Magnesium (Mg)	186 ppm	Sulfur (S)	10 ppm
Iron (Fe)	37 ppm	Copper (Cu)	0.8 ppm
Manganese (Mn)	2.4 ppm	Boron (B)	0.26 ppm

# Newton Wheat Plot Soil Test

Newton 0-6" / 0-24"  
Sampled: 11/15/2023

<i>Analysis</i>	<i>Value Found</i>	<i>Analysis</i>	<i>Value Found</i>
Soil pH (1:1, soil:water)	5.2	Buffer pH (Sikora)	6.5
Organic Matter (LOI), %	4.5%	Nitrate-N sub-surface	8 ppm
Magnesium (Mg)	270 ppm	Potassium (K)	311 ppm
Chloride (Cl) sub-surface	10 ppm	Calcium (Ca)	1819 ppm
Texture - Soil Type	loam	Sodium (Na)	24 ppm
Sand	32%	Sulfur (S) sub-surface	6 ppm
Silt	47%	Cation Exch. Capacity (Summation)	20.5 meq/100g
Clay	21%		

# Belle Plaine Wheat Plot Soil Test

Belle Plaine 0-6" / 0-24"  
Sampled: 11/14/2023

<i>Analysis</i>	<i>Value Found</i>	<i>Analysis</i>	<i>Value Found</i>
Soil pH (1:1, soil:water)	5.2	Buffer pH (Sikora)	6.6
Organic Matter (LOI), %	2.7%	Nitrate-N sub-surface	8 ppm
Phosphorus (P) Mehlich-3	51 ppm	Potassium (K)	213 ppm
Zinc (Zn) DTPA Extraction	4.0 ppm	Sulfur (S) sub-surface	4 ppm
Chloride (Cl) sub-surface	8 ppm		

# Caldwell Wheat Plot Soil Test

<i>Analysis</i>	<i>Value Found</i>	<i>Analysis</i>	<i>Value Found</i>
Soil pH (1:1, soil:water)	5.5	Buffer pH (Sikora)	6.7
Organic Matter (LOI), %	1.7%	Potassium (K)	154 ppm
Phosphorus (P) Mehlich-3	35 ppm	Calcium (Ca)	1,100 ppm
Magnesium (Mg)	163 ppm	Cation Exch. Capacity	9.8

# Clearwater Additional Notes

**Stripe Rust Observations** (1 = highly resistant 5 = Moderate 9 = Highly Susceptible)

Variety	Rating	Variety	Rating	Variety	Rating	Variety	Rating
AG Radical	9	Doublestop CL+	3	KS Mako	6	Rock Star	3
AM Cartwright	6	Gallagher	6	KS Providence	5	Showdown	5
AP Prolific	6	High Cotton	3	LCS Atomic AX	2	Strad CL+	2
AP18 AX	2	Kivari AX	9	LCS Helix AX	3	WB4401	2
AP24 AX	7	KS Ahearn	6	LCS Runner	9	WB4422	9
Bob Dole	7	KS Bill Snyder	2	LCS Steel AX	8	WB4523	3
Canvas	8	KS Hatchett	9	LCS Warbird AX	3	WB4699	6

\*Ratings were taken on the first replication on two different dates

\*Observations provided by Erick DeWolf, K-State Professor: Fungal Disease of Wheat

# Haysville Additional Notes

**Stripe Rust Resistance & Percent Infestation**

Variety	Resist	%	Variety	Resist	%	Variety	Resist	%	Variety	Resist	%
AG Radical	8	72	Doublestop CL+	3	3	KS Mako	8	17	Rock Star	2	1
AM Cartwright	6	20	Gallagher	7	27	KS Providence	7	6	Showdown	7	6
AP Prolific	7	17	High Cotton	5	2	LCS Atomic AX	2	2	Strad CL+	4	2
AP18 AX	3	3	Kivari AX	7	73	LCS Helix AX	5	12	WB4401	3	13
AP24 AX	8	13	KS Ahearn	7	10	LCS Runner	8	43	WB4422	7	67
Bob Dole	8	18	KS Bill Snyder	7	4	LCS Steel AX	8	43	WB4523	2	7
Canvas	7	27	KS Hatchett	8	73	LCS Warbird AX	6	8	WB4699	8	47

\*Resistance from 0 (high resistance) to 9 (high susceptibility); % = Percent of leaf infested with stripe rust

\*Observations taken on May 6, 2024

\*Observations provided by Clint Wilson, John C. Pair Center Agricultural Technician

**Plot Establishment Observations**

(1=Poor 2=Moderate 3=Verv Good)

Variety	Rating	Variety	Rating	Variety	Rating	Variety	Rating
AG Radical	3	Doublestop CL+	3	KS Mako	1.7	Rock Star	2.7
AM Cartwright	2.3	Gallagher	2.3	KS Providence	3	Showdown	3.3
AP Prolific	3.3	High Cotton	2.7	LCS Atomic AX	2.7	Strad CL+	3
AP18 AX	2.7	Kivari AX	2.7	LCS Helix AX	2.3	WB4401	1.7
AP24 AX	2.7	KS Ahearn	3.3	LCS Runner	2.3	WB4422	3.3
Bob Dole	2.7	KS Bill Snyder	2.7	LCS Steel AX	1.3	WB4523	1.7
Canvas	2.3	KS Hatchett	3	LCS Warbird AX	3.3	WB4699	2.3

\*Observations taken on March 28, 2024

\*Observations provided by Clint Wilson, John C. Pair Center Agricultural Technician