

**Table 2.** Differences in relative stripe rust value, grain test weight, and yield between non-sprayed and fungicide-sprayed plots of wheat varieties in 2024

Variety	Stripe rust rAUDPC (%) <sup>a</sup>			Test weight (Lb/Bu)			Yield (Bu/A)			Yield change (%)	
	No spray	Spray <sup>b</sup>	Difference	No spray	Spray <sup>b</sup>	Difference	No spray	Spray <sup>b</sup>	Difference	Loss by rust	Increase by spray
<b>Winter wheat</b>											
<b>PS279 (S check)</b>	<b>100.0</b>	<b>9.6</b>	<b>90.4 *</b>	<b>52.4</b>	<b>57.6</b>	<b>5.2 *</b>	<b>47.9</b>	<b>109.0</b>	<b>61.2 *</b>	<b>56.1</b>	<b>127.8</b>
UI Magic	36.9	3.9	33.0 *	54.5	59.6	5.1 *	77.6	130.2	52.6 *	40.4	67.8
Curiosity CL+	21.1	6.7	14.4 *	52.5	52.4	-0.2	112.4	138.4	26.1 *	18.8	23.2
LCS Jet	19.2	5.1	14.1 *	58.7	60.0	1.3	114.0	139.2	25.1 *	18.1	22.0
Otto	12.3	4.5	7.8 *	53.6	52.9	-0.6	119.7	144.2	24.5 *	17.0	20.4
Keldin	17.0	4.0	13.0 *	60.3	61.2	0.9	103.9	119.1	15.2	12.8	14.7
Mela CL+	15.7	6.9	8.8 *	56.1	57.4	1.3	118.7	134.8	16.0	11.9	13.5
LCS Helix AX	20.9	6.2	14.7 *	61.8	62.7	0.9	105.1	117.7	12.6	10.7	11.9
Northwest Duet	3.4	3.2	0.2	57.8	58.2	0.5	145.0	159.0	14.0	8.8	9.7
ARS-Crescent	13.8	2.8	11.0 *	55.8	55.9	0.1	116.1	125.2	9.1	7.3	7.8
Stingray CL+	6.8	6.3	0.5	54.9	55.1	0.2	112.8	121.0	8.1	6.7	7.2
LCS Shine	1.7	1.6	0.1	59.3	60.0	0.7	138.1	147.9	9.8	6.6	7.1
Castella	14.2	4.5	9.7 *	58.1	59.1	1.0	116.7	121.9	5.1	4.2	4.4
Northwest Tandem	2.3	2.8	-0.6	58.4	58.6	0.1	133.8	138.5	4.8	3.4	3.6
AP Iliad	2.4	2.2	0.3	60.1	59.9	-0.3	137.6	141.5	3.9	2.8	2.8
Pritchett	5.5	2.0	3.5	56.2	56.8	0.7	141.6	145.4	3.8	2.6	2.7
LCS Blackjack	3.7	3.4	0.3	55.3	56.4	1.1	142.0	145.0	3.1	2.1	2.1
LCS Artdeco	8.5	3.8	4.7	56.3	57.2	1.0	126.4	129.1	2.7	2.1	2.1
Piranha CL+	2.2	1.5	0.7	56.3	57.3	1.0	135.8	137.3	1.5	1.1	1.1
SY Assure	2.4	2.3	0.2	61.5	61.5	0.0	130.8	131.5	0.6	0.5	0.5
M-Press	4.5	4.3	0.3	58.6	58.7	0.1	131.6	131.2	-0.4	-0.3	-0.3
Resilience CL+	6.1	6.1	0.0	57.9	58.4	0.5	131.6	130.2	-1.4	-1.1	-1.1
LCS Hulk	8.3	9.8	-1.5	58.8	59.8	1.0	137.1	135.6	-1.5	-1.1	-1.1
SY Dayton	5.1	4.0	1.1	58.0	57.5	-0.6	125.4	122.4	-2.9	-2.4	-2.4
<i>Average<sup>d</sup></i>	<i>10.2</i>	<i>4.3</i>	<i>5.9 *</i>	<i>57.4</i>	<i>58.1</i>	<i>0.7</i>	<i>124.1</i>	<i>134.2</i>	<i>10.1</i>	<i>7.5</i>	<i>8.1</i>
<i>LSD (P = 0.05)</i>			<i>4.8</i>			<i>2.7</i>			<i>25.0</i>		
<b>Spring wheat</b>											
<b>AvS (S check)</b>	<b>100.0</b>	<b>6.5</b>	<b>93.5 *</b>	<b>59.4</b>	<b>62.5</b>	<b>3.1 *</b>	<b>47.9</b>	<b>68.0</b>	<b>20.1 *</b>	<b>29.6</b>	<b>42.0</b>
UI Stone	48.3	7.5	40.7 *	59.1	61.0	1.9 *	66.9	85.9	19.0 *	22.1	28.5
Kelse	62.0	8.5	53.5 *	58.9	60.1	1.2	59.6	70.1	10.5	14.9	17.6
Net CL+	33.9	8.2	25.7 *	61.1	61.6	0.5	60.5	68.7	8.2	11.9	13.6
Espresso	9.5	9.1	0.3	59.8	60.6	0.8	56.2	63.6	7.5	11.7	13.3
Roger	28.0	6.0	22.0 *	61.1	61.5	0.4	64.8	71.9	7.1	9.9	11.0
UI Cookie	31.8	4.5	27.3 *	58.3	59.2	0.9	76.1	84.3	8.1	9.7	10.7
Alum	20.0	6.6	13.3 *	59.9	60.3	0.4	63.4	69.4	6.0	8.6	9.5
WB9668	5.0	8.0	-3.0	60.3	60.6	0.3	53.4	58.1	4.7	8.1	8.9
Chet	19.2	5.9	13.3 *	61.7	61.4	-0.2	66.2	70.8	4.6	6.5	7.0
Buck Pronto	41.1	8.2	32.9 *	59.1	61.1	2.0 *	68.0	72.1	4.1	5.7	6.0
Melba	8.7	5.9	2.8	59.9	59.6	-0.3	65.9	69.0	3.1	4.4	4.7
Louise	17.0	9.6	7.4 *	57.3	57.6	0.2	62.7	65.4	2.7	4.2	4.4
WA 8351	8.4	7.0	1.4	61.5	61.6	0.1	71.7	73.7	2.0	2.8	2.8
AP Mondovi CL2	11.6	7.6	4.0	59.0	58.8	-0.2	71.0	72.5	1.5	2.1	2.1
Ryan	25.3	6.4	18.9 *	58.7	59.5	0.8	88.4	89.9	1.5	1.7	1.7
Seahawk	4.1	4.8	-0.7	59.6	58.8	-0.8	73.6	73.7	0.1	0.2	0.2
Hale	4.5	8.5	-4.0	61.1	61.3	0.2	69.9	68.7	-1.2	-1.8	-1.8
Hedge CL+	8.6	7.5	1.1	60.6	60.5	-0.1	71.7	70.3	-1.4	-1.9	-1.9
AP Venom	9.8	4.9	4.9	59.8	58.0	-1.8	68.7	66.7	-2.0	-2.9	-2.9
Glee	35.7	8.9	26.8 *	59.7	60.3	0.6	69.0	66.5	-2.5	-3.8	-3.6
Tekoa	7.7	8.6	-1.0	60.8	60.8	0.0	79.5	75.5	-3.9	-5.2	-5.0
JD	6.8	8.0	-1.2	59.7	59.1	-0.5	63.2	59.9	-3.3	-5.5	-5.2
WB9662	9.6	8.8	0.8	60.0	59.9	-0.2	60.9	57.7	-3.2	-5.5	-5.3
<i>Average<sup>d</sup></i>	<i>19.8</i>	<i>7.3</i>	<i>12.5 *</i>	<i>59.9</i>	<i>60.1</i>	<i>0.3</i>	<i>67.5</i>	<i>70.6</i>	<i>3.2</i>	<i>4.5</i>	<i>4.7</i>
<i>LSD (P = 0.05)</i>			<i>5.7</i>			<i>1.9</i>			<i>10.9</i>		

<sup>a</sup>rAUDPC = relative area under the disease progress curve, calculated using the four sets of severity data as an indication of the over the season stripe rust level.

<sup>b</sup>For winter wheat, Quilt Xcel at 14.0 fl oz/A was sprayed first time at early jointing stage (Feekes 5) on May 15 when stripe rust was 1-5% in the field, and second time on May 30 when plants were at boot stage (Feekes 10) and the non-sprayed PS279 plots had 25-40% stripe rust severity. For spring wheat, Quilt Xcel at 14.0 fl oz/A was sprayed first time at early jointing stage (Feekes 5) on June 13 when stripe rust was absent in the field, and second time on June 28 when plants were at boot stage (Feekes 10.1) and the non-first spray AvS plots had 10-20% stripe rust severity.

<sup>c</sup>Significant difference between the non-sprayed and fungicide spray plots at  $P \leq 0.05$  are indicated by \*\*\*.

<sup>d</sup>The average was calculated by excluding the susceptible (S) check.