

## Stripe Rust on Wheat: Scouting, Spraying and Potential Yield Losses

### When to Spray

- One scenario is when rust level in crop gets to 1% leaf coverage but before it covers 5% of leaf area. Yet another scenario is when 10% of crop is infected.
- If losses may top 10%, spraying may be warranted.
- Yield potential, profitable returns, weather, variety resistance, and fungicide costs need to be considered.
- If “hot spots” in a field are observed, this may be an indication that soon the disease will spread all around.

### Steps to determine 1% leaf area is compromised

- Field should be sampled in a diagonal pattern or a “W” pattern.
- Count total number of fully expanded green leaves and those that have any level of stripe rust.
- Stripe rust will cover one percent (1%) of leaf area when 30-40 leaves are infected per 100 green leaves.

<b>Potential Loss of Yield (%) from Stripe Rust based on Growth Stage of Wheat and Host Susceptibility. Z=Zadoks Decimal Growth Scale F=Feekes Growth Stage</b>				
<b>Start of Epidemic (Epiphytotic)</b>	<b>Percentage Loss in Crop based on Host Susceptibility</b>			
	<b>S(2)</b>	<b>MS(4)</b>	<b>MR(6)</b>	<b>R(8)</b>
<b>First Node (Z31; F6)</b>	<b>85</b>	<b>75</b>	<b>55</b>	<b>25</b>
<b>Flag leaf (Z39; F9)</b>	<b>75</b>	<b>45</b>	<b>15</b>	<b>5</b>
<b>Mid-boot (Z45; F10)</b>	<b>65</b>	<b>25</b>	<b>7</b>	<b>2</b>
<b>First awns visible; First Spikelet of Inflorescence Barely Visible (Z49; between F10-10.1)</b>	<b>50</b>	<b>10</b>	<b>3</b>	<b>1</b>
<b>Mid-heading, half of inflorescence emerged (Z55; F10.3)</b>	<b>40</b>	<b>5</b>	<b>2</b>	<b>0</b>
<b>Mid-flowering; Anthesis half way (Z65; 10.52)</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>0</b>

S=Susceptible MS=Moderately Susceptible MR= Moderately Resistant R=Resistant

Source: Gordon Murray, NSW DPI, Wagga Wagga, New South Wales, Australia. Plants developed at normal times and under normal weather.

Note: Consult your County Extension Agent, Extension Agent-IPM, or Extension Specialist for further insight.

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