

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.

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				
Start of Epidemic (Epiphytotic)	Percentage Loss in Crop based on Host Susceptibility			
	S(2)	MS(4)	MR(6)	R(8)
First Node (Z31; F6)	85	75	55	25
Flag leaf (Z39; F9)	75	45	15	5
Mid-boot (Z45; F10)	65	25	7	2
First awns visible; First Spikelet of Inflorescence Barely Visible (Z49; between F10-10.1)	50	10	3	1
Mid-heading, half of inflorescence emerged (Z55; F10.3)	40	5	2	0
Mid-flowering; Anthesis half way (Z65; 10.52)	12	2	1	0

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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