

Foliar Fungicides for Wheat

This trial is continuing on with our fungicide work, but with a program that is considering Septoria Tritici Blotch as well as Stripe Rust.

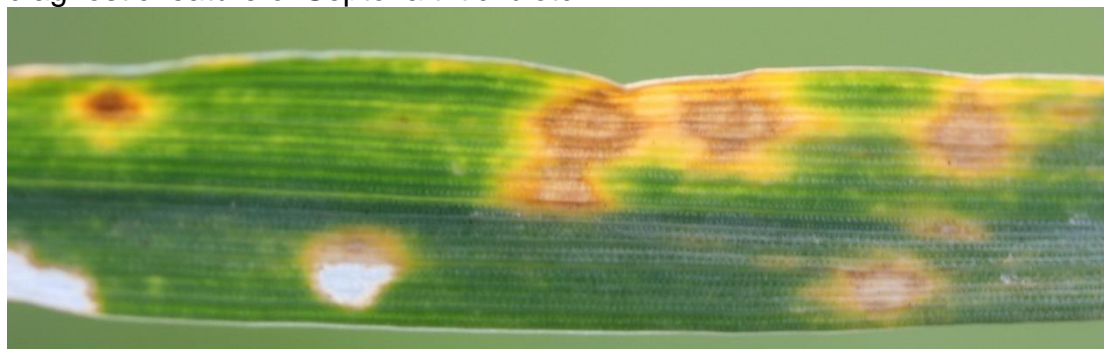
Septoria tritici blotch is an important stubble borne foliar disease of wheat in Victoria. This disease has increased in importance in the high rainfall cropping regions during the last five years, even though it has been well controlled in Victoria for the last 30 years through the use of partially resistant wheat varieties. The increase in Septoria in the high rainfall zone has been favoured by stubble retention, intensive wheat production, susceptible cultivars and favourable disease conditions.

Septoria tritici blotch survives from one season to the next on stubble. Following rain or heavy dew in late autumn and early winter, wind borne spores (ascospores) are released from fruiting bodies (perithecia) embedded in the stubble of previously infected plants. These spores can be spread over large distances.

Septoria tritici blotch. The presence of black fruiting bodies within the blotches is a



diagnostic feature of Septoria tritici blotch.



In contrast, Yellow Leaf Spot (above) has no black dots (perithecia) in the blotches. Early ascospore infections cause blotches on the leaves. Within these blotches a second type of fruiting body, pycnidia, are produced. Asexual spores ooze from pycnidia when the leaf surface is wet and spores are dispersed by splash to other leaves where they cause new infections. This phase of disease development depends on the rain splash of spores; therefore Septoria tritici blotch will be most severe in seasons with above average spring rainfall. A combination of wind and rain provides the most favourable conditions for spread of this disease within crops (from DEDJTR disease notes).

The trial was sown to Scout (MS for stripe rust; S-VS for septoria and S-VS for yellow leaf spot).

The fungicide products used (with thanks to Adama and Landmark McNeil Saunders) are:

Fungicide Registration for disease control in Wheat

Fungicide	Diseases controlled
Orius 430 g/l tebuconazole	Leaf Rust Stem Rust Stripe Rust Septoria nodosum Septoria tritici Yellow Leaf Spot
Prosaro 210 g/l tebuconazole 210 g/l prothioconazole	Leaf Rust Stem Rust Stripe Rust Septoria nodosum Yellow Leaf Spot Powdery Mildew
Tilt Xtra 250 g/l propiconazole 80 g/l cyproconazole	Leaf Rust Powdery Mildew Stem Rust Stripe Rust Septoria nodosum Septoria tritici Yellow Leaf Spot

The timing of the fungicide spray was at Z32 (second node) which is targeting STB control and Z39 (full flag emergence), targeting stripe rust control.

Treatment	Timing	Date(s)	Fungicide
Prosaro HR	Z32	4 Aug	Prosaro
“Protection”	Several	29/6, 4/8, 18/8, 8/9	TX, TX, O, O
Fung Z32 & 39	Z32 + Z39	4/8, 5/9	TX, O
Control	Z39	5/9	O

TX = Tilt Xtra, O = Orius,

The control treatment received a fungicide application at Z39 as this would be regarded as a standard treatment for an irrigated crop.

The “Prosaro HR” treatment used Prosaro at a higher than label rate as a PGR as well as a fungicide. The PGR

The “protection” treatment was applied prior to rainfall events where disease and infection pressure may have been higher, similar to the strategy used for the fabas.

Treatment	Yield t/ha	Protein %	Screenings %	Test Wt kg/hl
Fungicide Protection	9.87	10.8	0.9	82.0
Control (Z39)	9.48	10.8	0.9	83.5
Fungicide Z32 & 39	9.24	10.9	0.9	83.5
Prosaro Z32 High Rate	9.19	11.1	1.0	83.5
p	0.126	0.201	0.662	0.372
lsd	NS	NS	NS	NS
cv%	3.9	2.2	17.6	1.1

No treatment had any effect on grain yield or quality. Visual inspection of the plots noted very little disease present in any treatment.