Wheat Yellow Leaf Spot Trial

Yellow Leaf Spot, has become a widespread and important disease of wheat in Victoria. It has been supported by stubble retention, intense wheat production in the rotation and wide spread cultivation of susceptible wheat varieties.
Yellow leaf spot caused by the fungus *Pyrenophora tritici-repentis*, is predominantly a stubble-borne disease. This fungus survives between crops on cereal stubbles as mycelium in stubble and can survive on stubble for up to two years, if seasons are a very dry.
In the late summer/early autumn the fungus develops small black fruiting bodies on the stubble. The fruiting bodies contain large numbers of sexual spores which are forcibly ejected during cool (15°C) humid conditions. Spores land on nearby wheat plants and will infect leaves if they remain wet for more than 6 hours.
In isolated cases, in particular when susceptible wheat varieties are sown into wheat stubble, heavy infestations of yellow leaf spot can caused yield loss when the flag and upper leaves become infected. In most years, yellow leaf spot only infects the lower leaves and is generally regarded as causing limited yield loss. However, research at DEPI Horsham in 2012 and 2013 found infection of the lower leaves by the yellow leaf spot fungus reduced the yield of resistant varieties (MR and MRMS) by approximately 4 per cent and susceptible varieties (S and SVS) by approximately 15 percent (from DEDJTR disease notes).

The trial has been sown with two varieties, Bolac (MS-S) and Corack (MRMS) on Corack and Phantom (S-VS) stubble.
The fungicide strategy has been to spray when the risk of infection was increased, ie in front of rainfall events and irrigation.
Two fungicides have been used, a triazole and a strobulurin. The triazoles are the lower cost strategy, while the strobulurin is a fungicide that has prolonged protection. Neither fungicide will protect unsprayed leaves, hence the strategy to spray each time conditions are likely to favour infection as the leaves that have emerged since the last spray are unprotected.

The trial was sprayed four times – June 12th, July 9th, July 31st and August 31st.
Very low levels of YLS were observed early in the season, but little disease was present from August onwards.

Harvest Data

	Bolac	Corack
Treatment	Yield (t/ha)	Yield (t/ha)
Not Sprayed	4.70	4.95
Tilt	4.50	4.45
Amistar	4.66	4.73
p	0.754	0.235
lsd	NS	NS
cv%	10.0	10.3

No treatment (previous stubble susceptibility, fungicide or variety resistance) had any effect on yields.