

3.1.3 ASSESSING THE IMPACT OF FOLIAR FUNGICIDES ON YIELD AND GRAIN QUALITY IN KELLALAC WHEAT (HAMILTON, VIC)

Abstract:

Some unresolved factors caused the wheat crop to prematurely die. Grain yields and quality are both disappointingly low. No reliance can be placed on the yield results, however grain quality difference were apparent.

Researchers:

Dominic Bolton and Colin Hacking,
Southern Farming Systems Ltd.

Acknowledgements:

Thanks to Mick Keating (DPI) for planting and harvesting the trial. Thanks also to the chemical companies for supplying the products. Thanks also go to Nick Poole for his advice with the trial design and treatments.

Location: Hamilton

Growing Season Rainfall (Apr – Nov): 430 mm

Background:

It is believed that foliar leaf diseases in cereals may be having an impact on yield and grain quality in wheat, particularly in susceptible varieties. The economic returns resulting from the use of foliar fungicides to control these diseases is however unclear. This trial aims to provide further data for consideration.

Objective:

To assess the impact of using foliar fungicides for controlling leaf disease in Kellalac wheat.

Methodology:

A fully randomised block design was used with 4 replicates of each treatment. Plot length was 10 metres and bed width was 1.7 metres. All treatments were sown on raised beds.

Sowing Date: 17th May 2004

Harvest Date: 13th January 2005

Fertiliser: 100 kg/ha MAP at sowing plus
100 kg/ha Urea on 25/08/04

Variety: Kellalac

Table 1: Treatment List

Trt No.	GS39 Application
1	Nil
2	Folicur 145 ml/ha
3	Bumper 250 ml/ha
4	Opus 250 ml/ha
5	Amistar Xtra 400 ml/ha

Formulations:

Folicur 430EC – Tebuconazole

Opus 125SC – Epoxyconazole

Bumper – Propiconazole

Amistar Xtra – Azoxystrobin + Cyproconazole

Results:

Table 2: Yield and Grain Quality

Treatment	Yield kg/ha	Significant Difference	Protein %	Screen %	Test Weight kg/hl	TGW grams
4	1,796	I	10.90	4.325	58.98	29.30
1	1,738	I	10.88	4.535	62.62	29.55
5	1,630	I	11.38	4.913	61.49	30.15
3	1,505	I	11.38	4.880	61.92	29.09
2	1,472	I	11.55	5.652	58.59	29.00
LSD 5%	384		0.658	1.8829	9.5028	2.5775
CV	20.68		4.53	27.25	9.51	7.07

Discussion:

This was an extremely disappointing trial in terms of grain yield (Table 2.). Test weights and thousand grain weights are also very low. The results are indicating perhaps some frost damage or some other factor which halted grain fill prematurely. No reliance can be placed on the results.