

Trial 4: HYC Wheat Disease Management (FAR SAC W22-04-1)

cv Big Red

Key Points:

- In a low yielding trial all fungicide treatments were significantly higher yielding than the untreated, however as was found in previous seasons, lower fungicide input based on one – two units of fungicide have been the most cost effective.
- Septoria tritici blotch (STB) was the principal disease in the trial with much less effect due to the new pathotype of stripe rust.
- There were no significant differences in grain quality as a result of fungicide treatment.

Objectives: To develop profitable and sustainable approaches to disease management in High Rainfall Zone (HRZ) wheat.

Treatments:

The cultivar Big Red was evaluated with five levels of fungicide input:

1. Untreated
2. 1 unit of fungicide – GS39
3. 2 units of fungicide – GS32 & GS39
4. 2 units of fungicide – GS32, GS55 (straddle approach)
5. 4 units of fungicide – Flutriafol at sowing, GS31, GS39 and GS59

Table 1. Yield (t/ha), % Site Mean and grain quality, protein (%), test weight (kg/hL) & screenings (%).

	Yield			Quality		
	Yield (t/ha)	% of Mean	Protein (%)	Test Weight (kg/hL)	Screenings (%)	
Untreated	4.16 c	88.6 c	13.6	- 75.4	- 5.1	-
1F Flag Leaf Approach	4.84 ab	103.1 ab	13.5	- 77.4	- 4.0	-
2F Straddle Approach	4.79 ab	102.0 ab	13.6	- 77.1	- 5.1	-
4F Full Protection*	4.61 b	98.1 b	13.6	- 77.3	- 4.9	-
2F Standard Approach	5.08 a	108.2 a	13.4	- 76.5	- 4.4	-
Mean	4.69	100.0	13.6	77.1	4.7	
LSD 0.05	0.40	8.60	0.30	1.00	1.00	
P Val	0.004	0.004	0.537	0.259	0.122	
CV	5.59	5.60	1.59	0.84	13.91	

* Weed control may have reduced the yield in this treatment as this appears to be an aberrant result

Table 2. Details of the management levels.

Sowing date:		21 April				
Seed Rate:		180 Seeds/m ²				
Basal fertiliser:		100kg MAP				
Nitrogen:	06 July	50kg N/ha				
	23 August	100kg N/ha				
Fungicide:		Untreated	1 Fungicide Unit	2 Fungicide Units	4 Fungicide Units	Straddle approach
	GS00	---	---	---	Flutriafol 100g ai/ha	---
	GS31	---	---	Prosaro 300ml/ha	Prosaro 300ml/ha	---
	GS33	---	---	---	---	FAR F1-19 750ml/ha
	GS39	---	FAR F1-19 750ml/ha	FAR F1-19 750ml/ha	FAR F1-19 750ml/ha	---
	GS55	---	---	---	---	Opus 500ml/ha
	GS59-61	---	---	---	Opus 500ml/ha	---