

Trial 4a: HYC Wheat IDM Disease Management Germplasm Interaction (FAR SAC W22-04a-1)

- In a variable trial there was no significant yield effect of using Septoria tritici blotch (STB) infected wheat stubble or flutriafol on the basal fertiliser over the paddock canola stubble (standard).
- There was a significant interaction between the number of fungicide units applied and variety with the STB susceptible variety Revenue giving positive increases in yield as fungicide input increased from untreated (2.58 t/ha) to 4 units of fungicide producing 5.22 t/ha.
- The response to fungicide was less than a 1 t/ha increase with RGT Cesario and Anapurna with the latter giving its optimum response to four units of fungicide whilst RGT Cesario gave optimum response to 2 units of fungicide.
- The most prevalent disease in Revenue and Accroc was STB with low levels of stripe rust in the latter.
- Lower levels of disease were experienced in Anapurna and RGT Cesario with Anapurna suffering from low to intermediate levels of STB and RGT Cesario suffering from stripe rust and very low levels of STB.

Table 1: Influence of cultivar, management strategy and fungicide application on grain yield (t/ha).

	RGT Cesario		Anapurna		RGT Accroc		Revenue		Mean
Cultivar	6.20	a	5.60	b	4.36	c	4.22	c	5.09
	LSD	0.35					p-Value		<0.001
Disease Pressure									
Flutriafol	6.47	-	5.90	-	4.35	-	4.57	-	5.32 -
Standard	5.83	-	4.94	-	4.05	-	3.59	-	4.60 -
Stubble	6.32	-	5.96	-	4.66	-	4.50	-	5.36 -
Disease Pressure	LSD	<i>ns</i>					p-Value	0.483	
Disease Pressure x Cultivar	LSD	<i>ns</i>					p-Value	0.627	
Fungicide Management Regime									
Untreated	5.58	bc	5.21	cde	3.16	g	2.58	g	4.13 c
1 Fungicide Unit	6.22	ab	5.44	cd	4.37	f	4.24	f	5.07 b
2 Fungicide Units	6.55	a	5.58	bc	5.18	cde	4.84	def	5.54 a
4 Fungicide Units	6.47	a	6.17	ab	4.70	ef	5.22	cde	5.64 a
Fungicide Management Regime	LSD	0.22					p-Value	<0.001	
Cultivar x Fung Mgmt Regime	LSD	0.70					p-Value	0.003	
Disease Pressure x Fung Mgmt. Regime									
Flutriafol									
Untreated	5.88	-	5.87	-	3.40	-	2.50	-	4.41 -
1 Fungicide Unit	6.42	-	5.62	-	4.90	-	4.99	-	5.48 -
2 Fungicide Units	6.86	-	5.77	-	5.02	-	5.16	-	5.70 -
4 Fungicide Units	6.71	-	6.36	-	4.08	-	5.63	-	5.69 -
Standard									
Untreated	4.66	-	4.58	-	2.80	-	2.01	-	3.51 -
1 Fungicide Unit	5.77	-	5.01	-	3.64	-	3.49	-	4.48 -
2 Fungicide Units	6.48	-	4.82	-	5.11	-	4.16	-	5.14 -
4 Fungicide Units	6.40	-	5.35	-	4.67	-	4.72	-	5.28 -
Stubble									
Untreated	6.20	-	5.19	-	3.30	-	3.24	-	4.48 -
1 Fungicide Unit	6.46	-	5.68	-	4.57	-	4.25	-	5.24 -
2 Fungicide Units	6.32	-	6.16	-	5.42	-	5.20	-	5.77 -
4 Fungicide Units	6.29	-	6.80	-	5.36	-	5.31	-	5.94 -
Disease Pressure x Fung Mgmt	LSD	<i>ns</i>					p-Value	0.251	
Disease Pressure x Fung Mgmt x Cultivar	LSD	<i>ns</i>					p-Value	0.655	

Table 2. Details of the management levels (kg, g, ml/ha).

Sowing date:	20 April				
Seed Rate:		180 Seeds/m ²			
Basal fertiliser:		100kg MAP			
Nitrogen:	06 July	50kg N/ha			
	23 August	100kg N/ha			
		Untreated	1 Fungicide Unit	2 Fungicide Units	4 Fungicide Units
Fungicide:	GS00	---	---	---	Systiva
	GS31	---	---	Prosaro 300ml/ha	Prosaro 300ml/ha
	GS39	---	FAR F1-19 750ml/ha	FAR F1-19 750ml/ha	FAR F1-19 750ml/ha
	GS59-61	---	---	---	Opus 500ml/ha