

Table 3. Influence of fungicide management strategy, variety and canopy management regime on grain quality (note the wheat data has been omitted but can be available upon request).

	Fungicide	Seed rate	Nitrogen	Protein	Test wt	Retention	Screenings
Var.	Input	m ²	kg N/ha	%	Kg/hl	%	%
Laureate	Standard	150	140	12.3 -	66.3 -	89.3 de	2.6 a-d
	Standard	360	140	12.2 -	65.5 -	82.0 f	3.4 a
	High	150	140	12.4 -	66.7 -	90.0 cde	2.5 b-e
	High	360	140	12.1 -	66.3 -	87.4 e	2.3 c-g
	Standard	150	70	10.6 -	68.1 -	95.1 a	1.7 f-i
	Standard	360	70	11.4 -	66.5 -	93.2 abc	1.6 ghi
	High	150	70	11.5 -	67.6 -	93.6 abc	1.8 e-i
	High	360	70	11.3 -	67.0 -	93.4 abc	1.8 e-i
Mean				11.7 c	66.8 d	90.5 c	2.2 ab
RGT Planet	Standard	150	140	12.0 -	68.7 -	92.3 a-d	2.4 b-f
	Standard	360	140	11.8 -	67.9 -	90.0 cde	2.1 c-h
	High	150	140	11.8 -	68.2 -	93.1 abc	2.2 c-h
	High	360	140	11.3 -	68.7 -	91.0 b-e	2.0 c-i
	Standard	150	70	10.8 -	69.6 -	95.7 a	1.6 ghi
	Standard	360	70	11.1 -	68.9 -	94.2 ab	1.7 f-i
	High	150	70	10.8 -	69.8 -	95.4 a	1.5 ghi
	High	360	70	10.6 -	68.9 -	93.8 ab	1.8 d-i
Mean				11.3 d	68.8 b	93.2 b	1.9 b
Rosalind	Standard	150	140	12.9 -	67.8 -	95.9 a	1.4 hi
	Standard	360	140	12.7 -	69.1 -	95.6 a	1.5 ghi
	High	150	140	12.9 -	67.9 -	95.0 a	1.9 d-i
	High	360	140	13.1 -	68.3 -	95.7 a	1.2 i
	Standard	150	70	12.3 -	66.8 -	95.1 a	1.7 e-i
	Standard	360	70	11.9 -	69.4 -	95.0 a	1.6 f-i
	High	150	70	11.9 -	66.5 -	94.8 a	1.9 d-i
	High	360	70	12.0 -	68.7 -	95.0 a	1.7 f-i
Mean				12.1 b	79.5 a	---	2.4 a
Grand Mean				11.9	70.8	93.0	2.0
LSD Management p=0.05				0.4	ns	1.3	0.3
LSD Variety p = 0.05				0.3	0.7	1.2	0.3
LSD Var.x Man. P=0.05				ns	ns	3.5	0.8
P Value Management				<0.001	0.588	<0.001	0.001
P Value Variety				<0.001	<0.001	<0.001	<0.001
P Value Var.x Man.				0.685	0.289	<0.001	0.046

Trial 4. HYC Disease Management germplasm interaction

Objective: To develop profitable and sustainable approaches to disease management in HRZ barley.

Key Messages:

- There was no significant response to fungicide for grain yield or grain quality from spring sowing (table 1 and table 2).
- Disease levels were low, but despite up to 20% of the leaf area affected with net form of net blotch and scald there was no yield response (figure 1).
- Spring sown barley is incredibly robust, the canopy develops rapidly and disease develops later and has less impact on grain yield.

- This is a similar finding to 2020, and demonstrates intensive fungicide inputs, and more expensive SDHI chemistries may not be required to the same degree as autumn sown systems (see Millicent results 2021).

Treatments: 12 Fungicide management strategies (cultivar- RGT Planet)

Table 1. Influence of fungicide management on grain yield (t/ha).

Treatment			Yield	% of mean
GS00	GS30	GS39-49	t/ha	%
1	---	---	10.57	98.7
2	Systiva	Prosaro 300ml/ha	10.77	100.5
3	---	Prosaro 300ml/ha	10.82	100.9
4	---	Aviator Xpro 420ml/ha	10.57	98.6
5	---	FAR F1-19 750ml/ha	10.61	99.0
6	---	Radial 840ml/ha	10.59	98.8
7	---	---	10.82	100.9
8	Tilt 500 250ml/ha	---	10.76	100.4
9	Systiva	Radial 840ml/ha	10.66	99.5
10	Prosaro 300ml/ha	Radial 840ml/ha	10.73	100.1
11	Aviator Xpro 420ml/ha	Radial 840ml/ha	10.92	101.9
12	Prosaro 150ml/ha	Radial 420ml/ha	10.81	100.9
Mean			10.72	100.0
LSD 0.05			ns	ns
P Val			0.256	0.251

Table 2. Influence of fungicide management on grain quality.

Trt.	Protein (%)	Test weight (kg/HL)	Retention (%)	Screenings (%)
1	10.2	71.3	94.8	1.5
2	10.5	71.6	95.3	1.4
3	10.2	71.8	95.6	1.3
4	10.2	71.5	95.2	1.4
5	10.4	71.5	95.4	1.4
6	10.3	71.5	95.1	1.5
7	10.4	71.5	95.1	1.4
8	10.0	71.7	95.5	1.3
9	10.7	71.6	95.3	1.6
10	10.5	71.6	95.5	1.3
11	10.0	71.6	95.7	1.3
12	10.2	71.6	95.3	1.3
Mean	10.3	71.5	95.3	1.4
LSD (p=0.05)	ns	ns	ns	ns
P Val	0.741	0.955	0.942	0.945

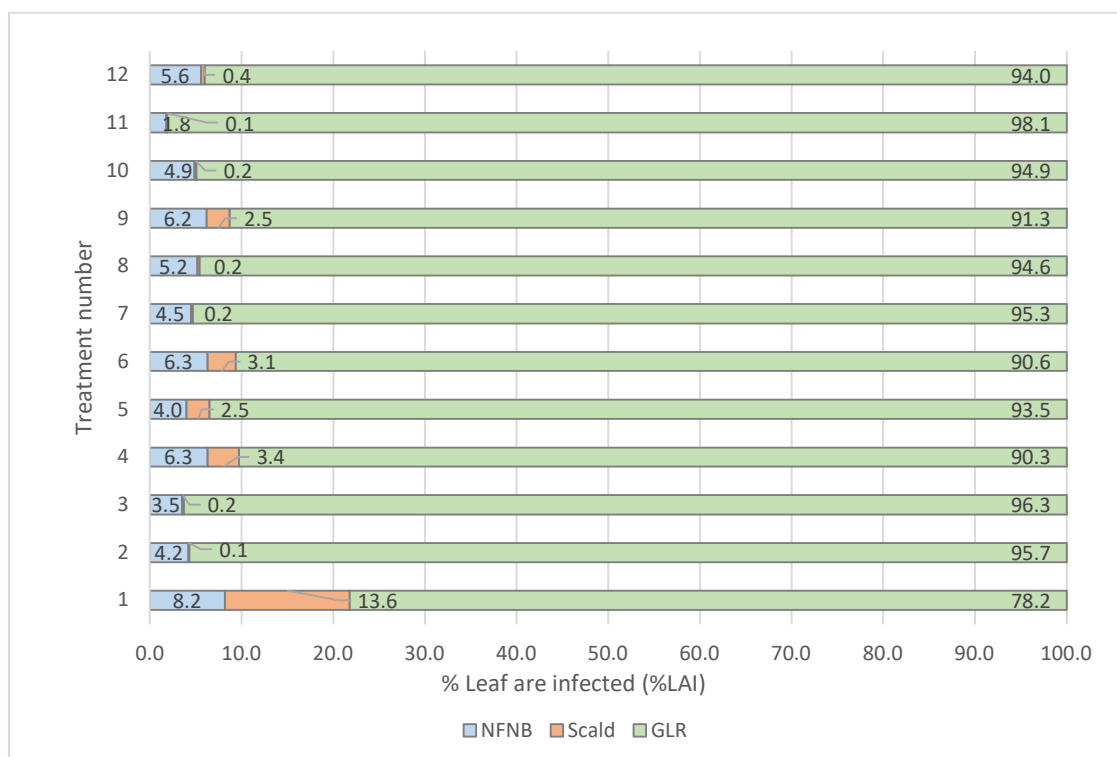


Figure 1. Disease severity and green leaf retention of the flag-2 leaf, assessed 21 January, GS75 (see table 1 for treatment details).

Table 3. Details of the management levels (kg, g, ml/ha).

Varieties:	RGT Planet	
Sowing date:	8 September	
Seed Rate:	300 seeds/m ²	
Sowing Fertiliser:	100kg MAP/ha	
Seed Treatment:	Pontiac	
Nitrogen:	1 Oct	80kg N/ha
Fungicide:	As per treatment list	