



2020/2021 Wheat Cultivar x Fungicide Trial

Location: Rokeby, Mid Canterbury

Trial Objective: To compare the fungicide response of six commercial wheat cultivars, as well as, better understanding the disease strengths and weakness of each cultivar.

Cultivars: Firelight, Graham, Ignite, Starfire, Voltron and Kerrin.

Sowing date: 7th May 2020

Fungicide Programmes:

Treatment	T0 (GS 30/31)	T1 (GS 32)	T2 (GS 39)	T3 (GS 65)
Untreated control	-	-	-	-
3 x Fungicides 1 x SDHI	-	Kestrel 1.0 + Phoenix 1.5	Elatus Plus 0.75 + Opus 1.0	Porsaro 1.0 + Amistar .05
4 x Fungicides T0 + 2 x SDHI's	Opus 1.0	Kestrel 1.25 + Phoenix 1.5	Elatus Plus 0.75 + Bolide 2.0	Prosaro 1.0 + Elatus Plus 0.75

Disease Results (mid-December):

Leaf Rust

- High leaf rust pressure late in the season.
- Highest leaf rust loading was seen in the untreated control of each cultivar (except Firelight) with both fungicide programmes providing significant control, reducing incidence to 0% across the five cultivars.
- Starfire and Graham exhibited the lowest leaf rust tolerance with an incidence on leaf 3 and 2 of 20% and 15% for Starfire and Graham, respectively.
- Ignite, Voltron and Kerrin had comparable disease loading with 4-6% incidence on leaf 3 and 2.
- Firelight displayed excellent tolerance to leaf rust, remaining free of the disease on the top three leaves.

Septoria

- Low *Septoria* pressure this season.
- Highest *Septoria* loading was seen in the untreated control of each cultivar with both fungicide programmes providing significant control.
- Starfire exhibited the lowest *Septoria* tolerance with 6-7% incidence on leaf 3 and 2.
- Firelight exhibited the greatest *Septoria* tolerance with <2% incidence on leaf 3.

Powdery Mildew:

- Powdery mildew incidence was low in the untreated controls this season (<3% on leaf 3 and 2).
- All fungicide programmes reduced the incidence to <1% except in Starfire where the T0 was required to reduce incidence to this level.
- Graham was the only cultivar to remain free of the disease on the top three leaves.

Yield (t/ha):

	Untreated	3 x Fungicides 1 x SDHI	4 x Fungicides T0 + 2 SDHI's
Firelight	13.6	14.9	15.2
Graham	8.7	14.6	15.2
Ignite	9.4	13.8	13.4
Starfire	8.1	13.9	14.5
Voltron	9.8	13.6	14.2
Kerrin	8.9	13.8	14.3
LSD 5%: 0.9			

Recommendations:

Cultivar	<i>Septoria</i>	Leaf Rust	Powdery Mildew	Take-all	Recommended Fungicide Strategy
Firelight	+++++	+++++	++++	+++	Lower input
Graham	+++	++	++++	++	Medium input
Ignite	++++	++++	+++	++	Lower input
Starfire	++	++	+	++++	Full management (especially early drilled after a wet winter)
Voltron	++++	++++	+++	++	Medium input
Kerrin	+++	++++	++++	+++	Medium input

Note: more +'s means greater disease tolerance