



Disease control in cereals

Many parts of New Zealand have experienced mild weather conditions through winter and as a result, some autumn sown cereals may be at or approaching GS30-31, so farmers will be considering T0 and T1 fungicides.

Septoria tritici blotch

- Septoria tritici blotch (STB) has been the main disease present in autumn sown wheat trials.
- FAR trials have shown that as well as reducing yield loss (Table 1), cultivars with greater resistance to STB also provide greater flexibility in fungicide programme choice.

Table 1. Maximum yield loss (t/ha) without fungicide in cultivar x fungicide programme trials in 2019.

Cultivar (resistance rating)	Chertsey (irrigated)	St Andrews (dryland)	Clinton (dryland)
Starfire (MRMS)	4.8	2.3	2.4
Graham (MR)	4.1	1.6	1.1
Reflection (MR)	1.0	0.4	1.5

Ramularia

- Ramularia leaf spot (RLS) has been the main disease present in recent FAR autumn sown barley trials.
- RLS is resistant to strobilurins and has become less sensitive to SDHI and triazole fungicides (Table 2). Testing by Plant & Food Research found 100% of *Ramularia collo-cygni* isolates are insensitive to SDHIs.
- FAR trials found the multisite fungicide Phoenix[®] provided good control of RLS when used in a mix with Proline[®]. However, this combination is weak on leaf rust, so additional rust protection may be required.

Table 2. Influence of fungicide on Ramularia leaf spot (RLS) and yield relative to the untreated in autumn sown barley in South Canterbury in 2018-19 and 2019-20.

Fungicide treatment (L/ha) and growth stage (GS)		Milford 2018-19 cv. Cassia		Geraldine 2019-2020 cv. Cassia	
GS31	GS39/49	%LAA by RLS	Yield (t/ha)	%LAA by RLS	Yield (t/ha)
Nil	Nil	49.6	9.1	45.0	8.5
Proline [®] 0.4	Proline [®] 0.4	35.6	9.8	27.2	9.2
Seguris Flexi [®] 0.6*	Seguris Flexi [®] 0.6*	43.7	9.4	26.2	9.7
Proline [®] 0.4 + Seguris Flexi [®] 0.6	Proline [®] 0.4 + Seguris Flexi [®] 0.6	33.1	9.8	13.5	9.8
Proline [®] 0.4 + Phoenix [®] 1.5	Proline [®] 0.4 + Phoenix [®] 1.5	16.6	10.3	6.2	9.9
	Mean	35.7	9.7	23.6	9.4
	LSD (p=0.05)	6.1	0.5	8.4	0.6

* Experimental treatment only

For more information see FAR's [Cereal Disease Management Strategy \(2018\)](#). An updated 2020 version will be available on-line before the end of September.