

Foliar Fungicides for Barley Trial

No fungicide treatment gave any yield benefit or extension of “green-ness” of the canopy.

The dry early winter and spring resulted in low disease pressure.

Previous trial work at the Block had shown yield improvements in barley with the application of a fungicide at Z32-33 despite little disease being observed.

Barley fungicide strategy differs from wheat as unlike wheat, the leaves that drive yield are the two below the flag and so fungicides are applied at the Z32-33 (around second to third node stage) to protect the flag – 1 and lower leaves.

This trial was sown with Compass (SVS to scald; MS-S to spot form of net blotch).

The following products were used:

Fungicide Registration for disease control in Barley

Fungicide	Disease
Orius	Scald
430 g/l Tebuconazole	Powdery Mildew
Amistar Xtra	Net Form Net Blotch
200 g/l Azoxystrobin	Spot Form Net Blotch
80 g/L Cyproconazole	Powdery Mildew
	Leaf Rust

The treatments were as follows:

1. Control – no fungicide applied
2. Amistar Xtra 300 ml/ha at second node (Z32) only
3. Amistar Xtra 300 ml/ha at second node (Z32)
+ Tebuconazole 145 ml/ha at Flag -1 (Z34)
4. Tebuconazole 145 ml/ha at Z32 only
5. Tebuconazole 145 ml/ha at Z32
+ Tebuconazole 145 ml/ha at Flag -1 (Z34)
- 6 “Full” Tebuconazole 145 ml/ha at Z32 and 145 ml/ha at Flag-1 and 145 ml/ha at full head emergence (Z59)
- 7 “Late” Tebuconazole 145 ml/ha at Z32 and 145 ml/ha at Z59

Late applications of Amistar are claimed to keep the canopy greener longer, and so the trial was scanned with a handheld Greenseeker NDVI post-flowering until the canopy had hayed off.

Fungicide application dates

Growth Stage	Z32	Z34	Z59
Date	3 rd August	28 th August	5 th September

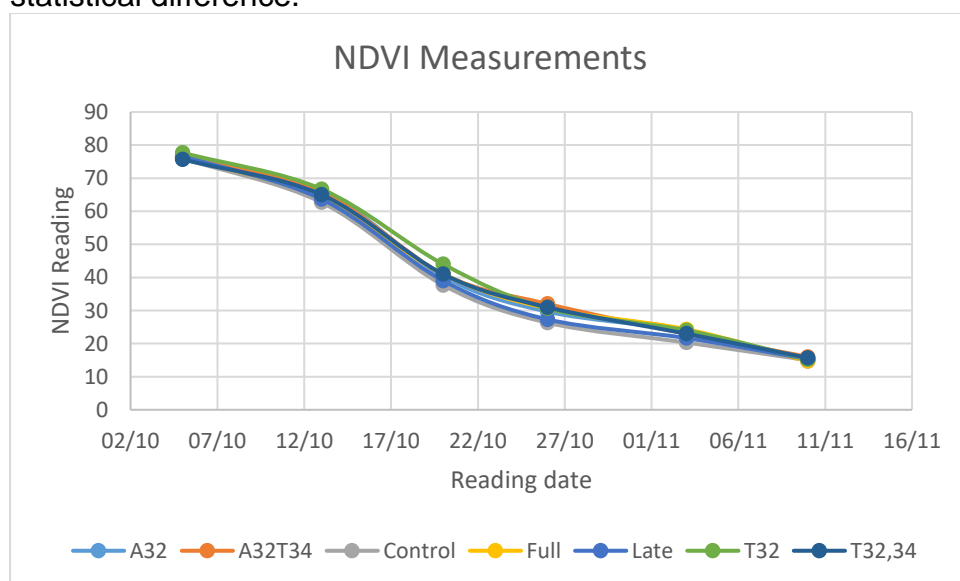
Results

Treatment	Yield t/ha	Protein %	Screen%	Retention %	Test Wt kg/hl
Tebuconazole 32	8.92	10.8	1.5	94.7	69.4
Am Xtra32 + Teb34	8.84	11.1	1.7	94.7	68.5
Amistar Xtra 32	8.79	11.2	1.7	94.6	67.2
Full 32 34 59	8.51	10.2	1.6	95.1	67.5
Teb 32&34	8.45	10.8	2.2	93.3	68.3
Late 32 59	8.38	11	1.5	94.6	69.3
Control	8.19	10.9	1.8	94.1	67.8
p	0.127	0.447	0.89	0.856	0.644
lsd	0.5747	NS	NS	NS	NS
cv%	4.0	5.4	>25	1.8	2.6

While all treatments had higher yields than the control, statistically these were not significant.

All grain quality testing results were not significantly different to that of the control.

Below is the summary of the NDVI measurements during grain fill and ripening. Very little difference was measured between treatments and at no stage was there any statistical difference.



What does it mean?

Knowing the varietal characteristics of your variety, in particular the disease ratings, is essential for correct management of your crop.

The season plays an important part in how severe disease is – 2017 saw dry conditions in late August through to harvest, which are not favourable for the occurrence and spread of the fungal diseases.

There was no extension of the canopy “greenness” from any of the fungicide strategies or products.

