

Novartis 'BTH' on wheat, canola, lentils and field peas

The aim was to investigate the effectiveness of BTH (benzothiadiazole) to increase a crops resilience to disease.

BACKGROUND

Plants possess their own defence mechanisms to help them combat the many potential disease-causing organisms they encounter every day. This innate defence system can be activated in young plants by the application of simple, non-pesticidal chemical compounds, so that they can help counter later attacks by pathogens, and thus limit disease development. This phenomenon is known as Systemic Acquired Resistance, SAR. SAR has a broad-spectrum mode of action, that is, it has been shown to protect many different plant species against a range of pathogens. SAR does not require genetic modifications to the plant. One chemical activator, a benzothiadiazole, is in the trial this year. BTH is an experimental compound under investigation by Novartis, through Dr Liz Dann at Sydney University.

METHOD

Pinnacle canola was sown on May 13, Frame wheat, Digger lentils and Dundale field peas were sown on May 24. All crops were sown with Mallee Mix 1 at 80kg/ha. BTH was applied early post emergent and was compared to foliar fungicides (Tilt at 500ml/ha). The trials were replicated (three replicates).

RESULTS

	Yield (t/ha)			
	Wheat	Canola	Field pea	Lentil
Control	2.23	Not harvested	0.71	0.89
BTH	2.23		0.82	0.78
BTH + Tilt (fungicide)	2.14		0.81	1.01
Tilt	2.24		0.82	0.78
Significant difference:	NS		NS	NS

INTERPRETATION

There were no differences in yield between the control, BTH and fungicide treated plots. Disease levels in 2000 were very low and had no impact on yield.