

Azoxystrobin effectively controls

Verticillium longisporum in vitro

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INTRODUCTION

Verticillium stem striping of oilseed rape is caused by the fungal pathogen *Verticillium longisporum*. The fungus is an amphidiploid hybrid and the only non-haploid representative of the genus *Verticillium*. The disease is damaging to oilseed rape in north-central Europe. Yield losses attributed to *Verticillium* stem striping are difficult to evaluate due to the common association with stem canker, and they greatly range (5-50%) between fields, seasons and geographical locations as well as plant species and cultivars. The management of *Verticillium* stem striping is still challenging and current disease control strategies do not provide appropriate protection of oilseed rape plants. In most field situations a few jointly used management techniques are necessary to prevent from the disease. By now, no effective fungicide treatments have been found.



The objective of this work was to study the efficiency of modern fungicides against *Verticillium longisporum*.

MATERIAL AND METHODS

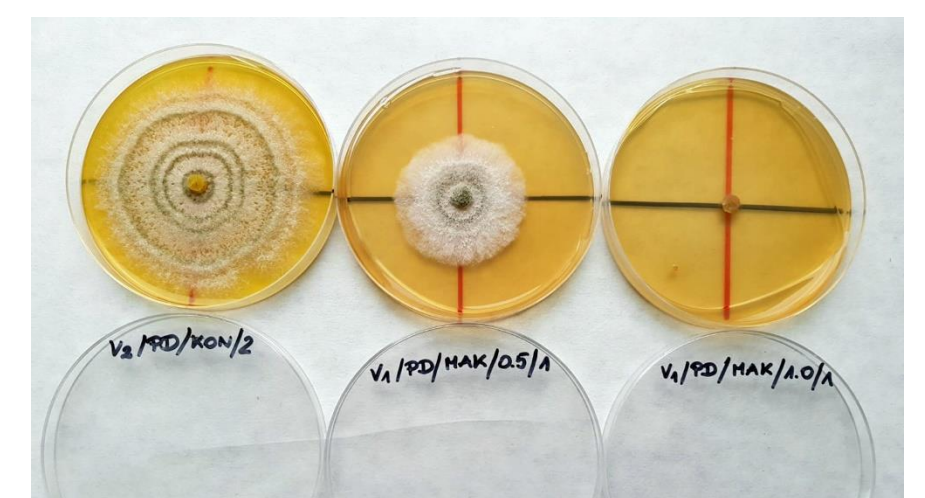
Isolates: 20, collected in 2018 from the fields of oilseed rape located in different regions of Poland

Active ingredients:

triticonazole 050FS, fludioxonil 050FS, difenoconazole 250EC and azoxystrobin 250SE

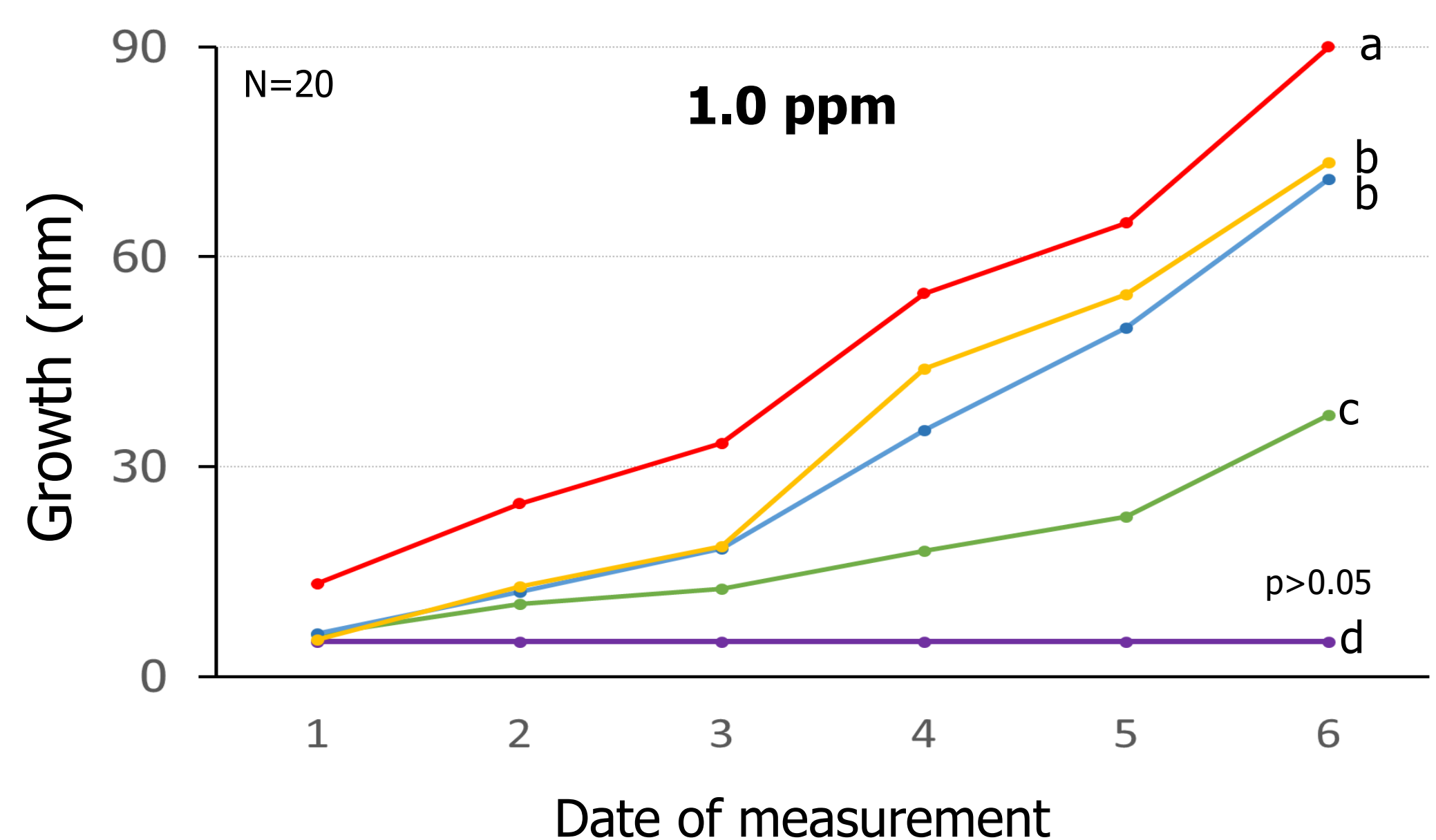
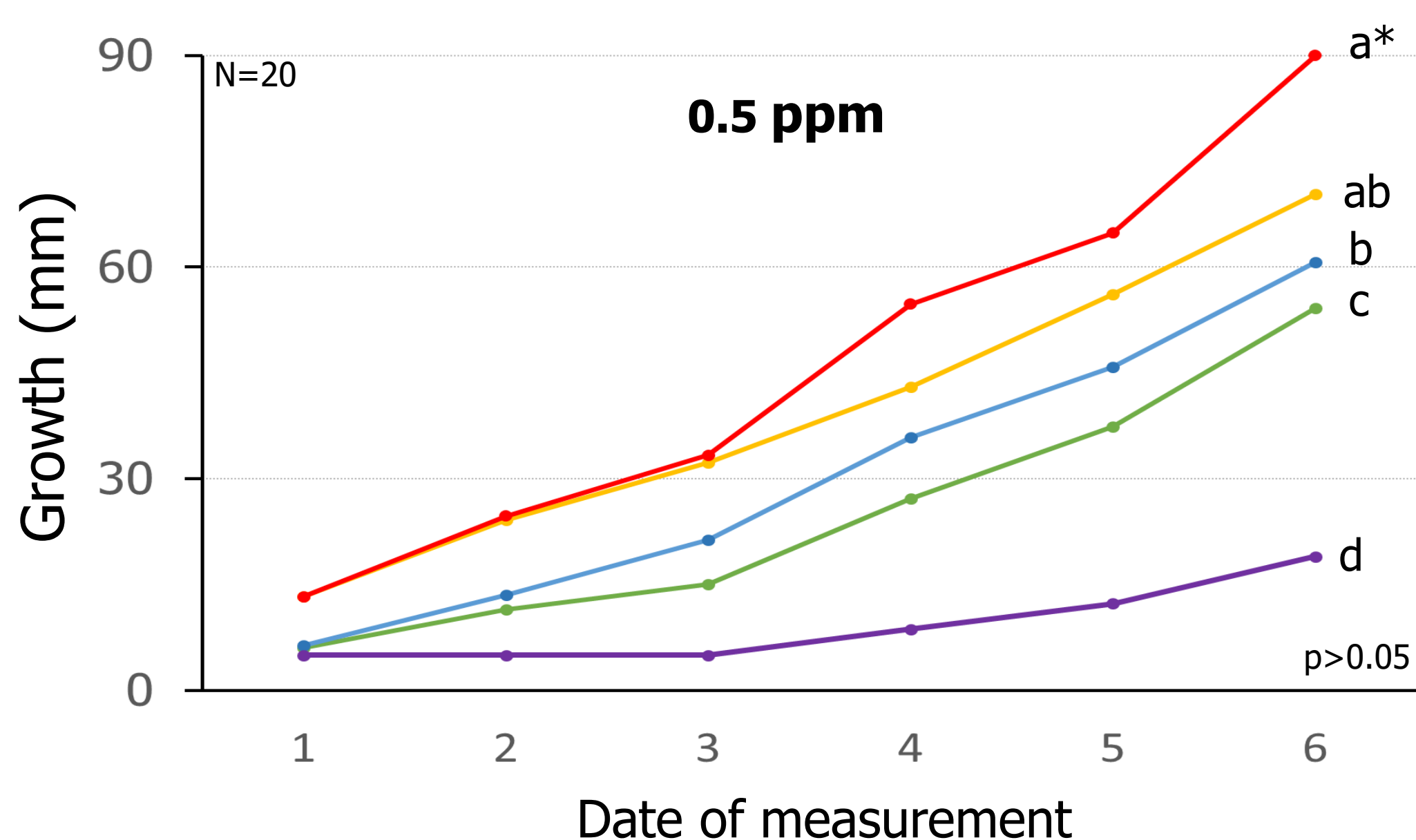
Concentrations: 0.5, 1.0, 1.5 and 3.0 ppm of active ingredient in PDA medium on Petri dishes; each concentration was replicated three times

Inoculum: 5-mm plugs of agar overgrown with mycelium, taken from actively growing cultures. The dishes were incubated at 18°C in the dark. Radial growth was measured every 3 days. The experiment was performed twice.



RESULTS AND CONCLUSION

Effect of different active ingredients on the linear growth of *Verticillium longisporum*



control

fludioxonil 050FS

azoxystrobin 250SE

difenoconazole 250EC

triticonazole 050FS

* the same letter marks no statistical differences

1 ppm of azoxystrobin 250EC effectively controls *Verticillium longisporum* in vitro