

Efficacy of *Exserohilum monoceras*, a potential fungi for biocontrol of *Echinochloa* species

ABSTRACT

Indigenous *Exserohilum monoceras* isolate 1125 was evaluated for its efficacy on different *Echinochloa* species. *Exserohilum monoceras* spores, prepared at 10³, 10⁴, 10⁵, 10⁶ and 10⁷ spores/ml concentrations and sprayed onto *E. crus-galli*, showed increased infectivity with increasing spore concentration. Disease progress of *E. crus-galli* at various leaf development stages revealed the highest area under the disease progress curve (AUDPC) was at the 4-leaf stage (535.69 unit²), followed by the 3-leaf (446.75 unit²), 2-leaf (377.22 unit²) and 6-leaf stage (263.72 unit²). The fungus was also tested on 4 species of *Echinochloa*. The results showed that the AUDPC was highest for *E. crus-galli* var *formosensis* (693.33 unit²), followed by *E. crus-galli* var *crus-galli* (638.33 unit²), *E. oryzicola* (470 unit²) and *E. colona* (447 unit²). The study illustrated that *E. monoceras* is a potential fungus for biological control that can be further developed into bioherbicide.

Keyword: *Echinochloa*; *Exserohilum monoceras*; Biocontrol agent; Bioherbicide