

**Survey and evaluation of native fungal pathogens for biocontrol of barnyard grass
(*Echinochloa crus-galli* complex)**

ABSTRACT

Echinochloa crus-galli is reported to be among the three most serious weeds of rice in many countries in Asia. In Malaysia, yield loss by *E. crus-galli* was about 41%. Selective chemical herbicides are primary means to control the grass. However, the extended use of the herbicides may develop negative implication to the environment and public health. Several fungal pathogens have been reported to attack barnyard grass (*E. crus-galli* complex) in various parts of the world. This study was to isolate, identify and evaluate the native fungi from diseased barnyard grass in paddy field, for potential as bioherbicide. From surveys carried out in 2003 to 2004 throughout the Peninsular Malaysia, several fungi species were identified to be associated with the diseases. A total of 82 isolates from 12 fungus genera have been isolated. Among the fungi were *E. monoceras*, *E. longirostratum* and *Curvularia lunata*. The fungus, *E. monoceras*, was consistently found associated with the disease, virulent, stable and has the ability to produce spores profusely in culture. These characteristics suggest that it can be used as biological control agent for the grass.

Keyword: *Echinochloa*; Barnyard grass; *Exserohilum monoceras*; Biocontrol agent