

Abstract

Striga hermonthica is a parasitic weed which largely constrains maize and sorghum production in Western Kenya. The weed mostly invades small scale farms and depending on severity, it may cause damage ranging from 10% to complete crop failure thereby aggravating the food insecurity in that region. This study aimed at evaluating fungal isolates as possible biocontrol agents against the weed. Fungi were isolated from diseased *Striga hermonthica* and their virulence efficacy against the weed tested in a greenhouse. All the fungal isolates tested caused infection and consequently death of the weed. *Fusarium incarnatum* had the highest infection rate of 92% followed by *Gibberella intricans* and *F. chlamydosporum* at 90% each. *Fusarium oxysporium* caused the highest mortality of 60% with *Gibberella intricans*, causing the least mortality of 36%. *F. oxysporium* was the most aggressive and potent fungal isolate against the weed hence a suitable candidate for exploitation as a mycoherbicide against the weed.