

**EFFICIENCY OF INTEGRATING SEED TREATMENT AND FOLIAR SPRAYS IN
MANAGEMENT OF ASCOCHYTA BLIGHT (*ASCOCHYTA RABIEI* L.) OF CHICKPEA
(*CICER ARIENTINUM* L.)**

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Abstract

Ascochyta blight, caused by the fungus *Ascochyta rabiei* L., is the most limiting biotic factor in chickpea production in Kenya. To evaluate the efficiency of integrating seed dressing and multiple foliar sprays using azoxystrobin and difenoconazole for ascochyta control, field trials were conducted at ATC-Koibatek and Egerton Njoro in cropping season 2014. The experiments were laid out in a split-split plot design with the two fungicides in the main plots, spray schedule in the subplot and seed dressing in the sub-sub plots. Plots were sprayed 2 to 6 times in the sub plots at five stages of chickpea growth; seedling, early vegetative, late vegetative, flowering and podding stages. In the sub-sub plots, asymptomatic chickpea seeds were left treated or untreated with either azoxystrobin or difenoconazole fungicides. The treatments were replicated in three blocks in RCBD arrangement. Data on disease incidence and severity were collected and subjected to analysis of variance following PROC GLM procedure in SAS. Significant means at F-test were separated using Tukey's test statistics at $P \leq 0.05$. Fungicides applied as foliar sprays were more effective in suppressing disease incidence and severity than seed dressing alone. Seed dressing was effective in delaying initial disease incidence and reducing severity at early stages of development but lacked advantage over foliar spraying alone in later stages of chickpea growth. Cultivation of susceptible chickpea cultivars in Kenya under high disease pressure environment may require five to six foliar sprays with either azoxystrobin or difenoconazole while three to four foliar sprays with either of the two fungicides are required for effective management under low disease pressure.

Key words: *Ascochyta rabiei*, multiple sprays, disease incidence, severity, seed dressing