

Comparative Efficacy of Benomyl and Three Plant Extracts in the Control of Cowpea Anthracnose Caused by *Colletotrichum lindemuthianum* Sensu Lato

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Abstract : Field experiment was conducted to compare the efficacy of hot water extracts of three plants (*Ricinus communis*, *Jatropha gossypifolia* and *Datura stramonium*) with benomyl in the control of cowpea anthracnose disease. Three concentrations of the extracts (65, 50 and 30%) were used in the study. Result from the experiment shows that all the extracts at the tested concentration reduced the incidence and severity of the disease. *D. stramonium* at 65% concentration compares favourably with that of benomyl fungicide in reducing incidence and severity of infection. At 65% concentration of *D. stramonium*, incidence of the disease was 22% on pooled mean basis, and this was not significantly different from that of benomyl (21%). Similarly, the percentage of normal seeds recorded at this same concentration of the extract was 85% and was not significantly different from that of benomyl (86%). In terms of disease severity trace infections were observed on the cowpea plants at this concentration of the extract and that of benomyl. However, at lower concentrations of all the extracts, significant variations were observed on incidence of disease and percentage of normal seeds such that values obtained from use of benomyl were higher than those obtained from the use of the extracts. The study, therefore, shows that extracts of these indigenous plants can be used as a substitute for the benomyl fungicide in the management of anthracnose disease.

Keywords : benomyl, *C. lindemuthianum*, disease incidence, disease severity

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