

Efficacy of BAU-Biofungicide, Chemical Fungicides and Plant Extracts on Rice (*Oryza sativa* L.) Diseases and Yield

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Abstract

Extract of garlic (*Allium sativum* L.), Neem (*Azadirachta indica* L.); BAU-Biofungicide (Trichoderma based preparation) and Bavistin DF (Carbandazim) and Potent 250 EC (Propiconazole) were tested in laboratory and field conditions for eco-friendly management of diseases of rice (*Oryza sativa*, L.) cv BRRI dhan28. BAUBiofungicide (2%) was found to have profound effect in inhibiting the mycelial growth of *Bipolaris oryzae* (brown spot), *Cercospora oryzae* (narrow brown leaf spot) and *Rhizoctonia solani* (sheath blight) in vitro and marked reduction of disease incidence of brown spot, narrow brown leaf spot and sheath blight in the field. It was noted that significantly low incidence of narrow brown leaf spot and sheath blight disease was observed in plots sprayed with Carbendazim (0.1%) in the field as well as mycelial growth inhibition of *Cercospora oryzae* and *Rhizoctonia solani* was found in Carbendazim (0.1%) under laboratory condition. Highest (20.20%) grain yield was increased in Propiconazole (0.1%), while (17.84%) higher increase grain was obtained with BAU-Biofungicide (3%). No statistical significant difference was observed between yield of BAU-Biofungicide and Propiconazole. Most of the detected seed borne pathogens were controlled by BAU-Biofungicide and Propiconazole. Maximum germination (%) was observed over control when seeds were treated with BAU-Biofungicide (2%). BAUBiofungicide (2%) exhibited (40.45%) higher increase in vigour index over control. Results indicated that the greatest antagonistic effect of BAU-Biofungicide was found in reducing disease incidence and increased grain yield as an alternative option of synthetic fungicide.

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Biography

Hyat Mahmud is completed his post graduation in Bangladesh Agricultural University, Bangladesh. He is mycologist and plant pathologists. He has published so many research papers in

international reputed journals. He recently completed MPhil in Botany. He has published 2 research papers. He is a good speaker he attended so many conferences and got so many honariums