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Comparative efficacy of BAU-biofungicide and synthetic fungicides in management of diseases of rice (*Oryza sativa* L.) for quality seed production

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Extracts of garlic (*Allium sativum* L.) and neem (*Azadirachta indica* A. Juss.), BAU-biofungicide (Trichoderma based preparation), Potent 250 EC (Propiconazole) and Bavistin DF (Carbendazim) were evaluated under laboratory and field conditions in controlling diseases of rice cv BR11 for quality seed production. BAU-biofungicide (2%) showed significant effect in controlling mycelial growth of (*Bipolaris oryzae* (Breda de Haan) Shoem.), *Cercospora oryzae* I. Miyake, *Rhizoctonia solani* Kuhn. and *Ustilagoidea virens* (Cke.) Tak. in vitro test and also reduced disease severity of brown spot, narrow brown leaf spot, sheath blight and false smut as of Propiconazole (0.1%). Carbendazim (0.1%) showed better result in inhibiting the disease severity of narrow brown leaf spot and sheath blight. Propiconazole (0.1%) increased highest 26.40% grain yield, while BAU-biofungicide (3%) increased 20.42% grain yield over untreated control in the field. Formation of maximum (74.33%) apparently healthy seed, highest germination (98.00%) increased 36.49% of vigor index by BAU-biofungicide (2%) over control. Major seed borne fungi of harvested seeds were controlled by foliar application of BAU-biofungicide.

Biography

Hyat Mahmud has completed his PhD degree from Department of Plant Pathology, Bangladesh Agricultural University, Bangladesh. He is the Additional Deputy Director (Crop) of Department of Agricultural Extension, Khamarbari, Kushtia, Bangladesh. He has published more than 24 papers in reputed national and international journals. He has been serving as a Reviewer of reputed many international journals. He has also attended many national and international workshops and gathered good knowledge in the areas of research, teaching and training.

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