

**TREATMENT WITH BOTANICALS AND BIOLOGICAL CONTROL
AGENTS IN REDUCING SEED TRANSMISSION OF WHEAT
BLAST PATHOGEN *Magnaporthe oryzae triticum***

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Executive Summary

Wheat blast caused by the fungus, *Magnaporthe oryzae triticum* (MoT) is one of the most devastating diseases of wheat. It has caused crop losses up to 40 to 100% in various wheat cultivars in different wheat growing region. Seed transmission of MoT has been proved in the previous study. The MoT-infected seed samples var. Prodig was collected from Meherpur sadar, mujibnagar, Gangni, Chuadanga, Kustia, and Jashore of Bangladesh during the period from January to April 2021. Seeds were treated with two botanicals viz. *Aloe vera* and *Nigella sativa* and three bioagents namely *Trichoderma harzianum*, *Purpureocillium lilacinum*, and *Bacillus thuringiensis* including one chemical treatment Provax-200 WP and one untreated control treatment. The highest reduction in the incidence of MoT isolates was found when seeds were treated with *P. lilacinum* which was statistically similar to seed treatment with either *T. harzianum* or *B. thuringiensis*. Seed treatment with botanicals also reduced MoT incidence significantly. Percent seedling infection by MoT significantly differed among different treatments and ranged from 7.99% to 13.71% where the highest and lowest seedling infection was recorded in untreated control and *B. thuringiensis* treated seeds, respectively.

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