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## **Research Article**

## Management of sheath blight of rice through integrated application of bio-agents, organic amendments and resistance inducing chemicals

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## **SUMMARY**

Eco-friendly approaches have attained importance in modern agriculture to curtail the hazards of extensive use of pesticides for disease control. Present study was undertaken to assess the effect of some different management practices, which relies on less chemical application, on disease severity, per cent disease incidence (PDI) of sheath blight and yield parameters of rice in the field experiment during 2013 and 2014. Among different approaches assessed against sheath blight of rice, pre-transplanting soil application of combination of *Trichoderma harzianum* + *Pseudomonas fluorescens* + farm yard manure followed by foliar spray of zinc sulphate (0.5%) + lime (0.25%) at maximum tillering stage showed maximum reduction in sheath blight severity (50%), per cent disease incidence (55.46%) and higher grain yield (28.55%) over the control. Ten ears and 1000 grain weight showed positive correlation with grain yield. The treatments which consisted pre-transplanting soil application of bio-agents + FYM/ vermi-compost showed greater number of tillers per hill as compared to those treatments where nothing was applied in the soil.

Key Words : *Pseudomonas fluorescens*, Resistance inducing chemicals, *Rhizoctonia solani*, Sheath blight, *Trichoderma harzianum* 

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