

## Research Article

# Field Evaluation for Resistance and Fungicides Against Sheath Blight (*Rhizoctonia solani*) of Rice

Nishant Prakash<sup>1</sup>, Abhijeet Ghatak<sup>2</sup>, Govind Kumar<sup>3</sup> and Prabhat Kumar<sup>2</sup>

<sup>1</sup>Krishi Vigyan Kendra, Lakhisarai, Bihar, India; <sup>2</sup>Bihar Agricultural University, Sabour, Bhagalpur, Bihar, India; <sup>3</sup>Krishi Vigyan Kendra, Purnea, Bihar, India; Email: [ghatak11@gmail.com](mailto:ghatak11@gmail.com)

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### Abstract

In India, rice is the most widely cultivated crop, serving as a major source of income for the smallholders. Sheath blight (ShB) is one of the important diseases causing a major threat to rice production across India, including Bihar. To find the best management chemical alternatives against ShB, three fungicides, namely Validamycin, Hexaconazole and Propiconazole were tested for five consecutive years. All the chemicals showed a significant reduction in disease incidence in comparison to the control. However, the minimum number of infected tillers (2.78), maximum plant height (109.30 cm), and maximum yield (52.50 q ha<sup>-1</sup>) were recorded in Hexaconazole and an improved benefit-cost ratio was obtained. Further, to identify a resistance source, ten rice varieties were evaluated under field conditions, where moderate resistance against ShB was expressed by five varieties. Integrating a moderately resistant variety along with the application of Hexaconazole can be effective in reducing ShB.

**Key words:** Disease severity, fungicides, *Rhizoctonia solani*, rice cultivar

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