

EVALUATION OF *PSEUDOMONAS FLUORESCENS* AGAINST BROWN SPOT, SHEATH BLIGHT AND GLUME DISCOLOURATION OF RICE

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ABSTRACT

Pseudomonas fluorescens is the most widely used biocontrol agent for crop disease management. Field studies were conducted to evaluate *Pseudomonas fluorescens* against sheath blight, brown spot and glume discolouration of rice. Different combinations of application methods viz, seed treatment + seedling root dip, seed treatment + soil application, seed treatment + seedling root dip + foliar spray, seed treatment + soil application + foliar spray were evaluated in the field in comparison with fungicide carbendazim. The application of *Pseudomonas fluorescens* by any of these four combinations reduced the severity of brown spot, sheath blight and glume discolouration as effective as the fungicide, carbendazim and were significantly superior to control. The combination of three applications reduced sheath blight severity significantly than two applications. There was significant improvement in grain yield also by the application of *Pseudomonas fluorescens*. Different combinations of applications of *P. fluorescens* suitable to the crop establishment method can be selected for disease management in rice.

KEYWORDS: Biological Control, *Pseudomonas Fluorescens*, Sheath Blight, Brown Spot, Glume Discolouration, Rice

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