

Field Trials of Induced Disease Resistance Materials on Control of Rice Blast Disease and Bacterial Leaf Blight¹

Yi-Chen Tsai² Wen-Tung Hsieh³

Abstract

Inducing plant resistance is one of the strategies of disease management. This study is to evaluate the effect of induced disease resistance materials on controlling rice diseases such as rice blast and bacterial blight in the fields. In field trial of 2015, sprayed the 1,000-fold dilution of phosphorous acid could reduce bacterial blight with lowest disease degree of 18.98%, probenazole could reduce disease level to 30.28%, and the untreated control group showed the highest disease degree of 41.67%. In the field trial of 2016(1st cropping season), the results showed that probenazole treatment has better control efficacy than tricyclazole in rice blast disease, and control rate could up to 90%. According to the results of field trials conducted on the second crop of 2016, both of treatments of phosphorous acid and Probanasol showed the similar efficiency on control of bacterial leaf blight of rice. Conclusively, it was recommended for farmers that pre-application of induced disease resistance materials is encouraged to prevent the occurrence of rice diseases in the fields.

Keywords: rice, rice blast, bacterial leaf blight, induced resistance, phosphorous acid, Probanasol

1. Research article No.298 of Hualien District Agricultural Research and Extension Station.

2. Associate researcher, Division of Crop Environment, Hualien DARES.

3. Research assistant, Division of Crop Environment, Hualien DARES.