Effects of Alternate Wetting and Drying Irrigation and Nitrogen Fertilization on Sheath Blight of Rice

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# Abstract

Water and nitrogen management play vital roles in rice production. However, the mismanagement of these two management practices may trigger plant disease epidemics such as sheath blight of rice, caused by *Rhizoctonia solani*, which is favored by wet conditions, high relative humidity, and high nitrogen (N) fertilizer levels. To understand how different combinations of water and nitrogen management affect sheath blight epidemics, we conducted two separate split-plot experiments with two irrigation regimes and differing nitrogen treatments in the dry seasons of 2015 and 2016. Disease scoring was the same in both experiments using a sheath blight assessment scale for field evaluation developed at the International Rice Research Institute (IRRI) to assess the severity on infected sheaths and leaves while sheath blight incidence on tillers were counted per hill. While we were unable to detect any differences in disease in either experiment due to irrigation methods, N rates or the interaction of the two treatments in either season we suggest that further research on this subject is warranted.

## Materials and Methods

## Results

## Discussion

## Acknowledgments

## Literature Cited