Effect of Different Kinds and Level of Nitrogen Fertilizer on Production of Rice Cultivars Taitung 30 and Taitung 33

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Abstract

A field trial was conducted to determine the effects of nitrogen fertilizer source and application rates on grain production and quality of rice cultivars Taitung 30 and Taitung 33 in Taitung area during 2013 to 2015. The results revealed that plant height and yield parameters increased significantly with the application rate of nitrogen fertilizer. On the other hand, the head rice percentage of brown rice was decreased about 1.9 % to 23.0 %, when the nitrogen fertilizer application rate from 90 kg N/ha to 270 kg N/ha. Quality of brown rice were significantly reduced by high doses of nitrogen due to the increased of fissure and cracked kernels, immature kernels, and dead kernels. However, there were no significant difference between the treatments of nitrogen sources (ammonium sulfate and urea) on head rice percentage of brown rice and the yield.

Keywords: Rice, Nitrogen response, Brown rice quality.

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