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Concentrations of Kjeldahl-digested Nitrogen, Amylose, and Amino Acids in Milled Grains of Rice (*Oryza sativa* L.) Cultivated under Organic and Customary Farming Practices

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Abstract:

The concentrations of Kjeldahl-digested N were significantly higher in milled rice grains cultivated under customary farming practices than in those grown organically. However, the amylose content showed no differences between the two cultivation methods. The concentrations of hydrolyzed amino acids tended to be higher in milled rice grains obtained using customary farming practices than in those obtained using organic farming practices. In contrast, the concentrations of free amino acids were one hundred or more times lower than those of hydrolyzed amino acids. However, of the free amino acids, aspartic acid, glutamic acid, glutamine, and asparagine were significantly higher in milled rice grains from organically grown rice than in those from the customary farming practices. However, studies on the relationship of amount of components such as Kjeldahl-digested N and amino acids to eating quality of rice remain to be examined.

Keywords:

Amino acids, Amylose, Customary farming practice, Kjeldahl-digested nitrogen, Organic farming practice, *Oryza sativa* L., Rice

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