

Postharvest quality enhancement of 'Mekongga' rice as a response to liquid organic fertilizer application

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Abstract

The aim of this research was to study the effect of Liquid Organic Fertilizer (LOF) (formulated by the research team from agricultural waste and biological agents) on postharvest properties of rice cultivar 'Mekongga'. The study was conducted in Sragen, Central Java Province. The experiment was arranged in a split plots design. The main plots were dose of NPK fertilizer (farmer dose and 50% of farmer dose). The subplots were type of LOF (LOF "Double", LOF "Plus", LOF "Bacteria", LOF "Bacteria+Plus", without LOF). Concentration of LOF applied was 15 ml/L. Quality parameters observed were percentage of head rice, broken rice, husk rice and bran. Nutrition components that were analyzed included amylose, amylopectin, protein, energy, fibre, fats and carbohydrates. Data were subjected to analysis of variance followed by Duncan's Multiple Range Test (α : 5%). The results showed that dose of NPK did not significantly affect recovery, rice weight, fiber and amylose of rice. The highest nutrition content of rice (except protein and amylose) resulted from application of LOF "Bacteria" and LOF "Bacteria+Plus". Economical analysis showed that the application of LOF gave more profit, as it can reduce the amount of NPK fertilizer up to 50% and still gave the same yield as those treated with NPK farmer dose.