

The effect of flooding on rice characteristics of 'Cilamaya Muncul' on various days after planting during the last reproductive and maturation phase

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Abstract

The number of flooded rice fields in Indonesia is quite large. In Indonesia about 13.3 million ha is flooded every year. The flood causes a reduction in quality and quantity of rice, especially when the floods happen when the panicle is being filled at the end of the reproductive and maturation phase. The aim of this research was to determine the effect of flooding on characteristics of husk, hulled and cooked rice of 'Cilamaya Muncul' at various ages after planting. The research used a descriptive method with statistical analysis to observe significance and relationship among treatments. This research was conducted in the village of Pamotan sub district Kalipucang, Ciamis, West Java. The observations were carried out at the age of 90, 95, 100, 105 and 110 days after planting. The result showed that the submerged rice grain had higher protein, moisture, amylase contents than the normal rice. However, it had lower yield, hardness, stickiness, and brightness than the normal rice. After planting 65-110 days, the height of the water flood decreased, and similarly the rate of respiration. This phenomenon made harvesting of flooded rice possible in the earlier age. Based on chemical composition in each phase (reproductive and maturation), flooded rice had the potency to be utilised as food. Harvesting in older age would cause further decrease in quality.