

Effects of micronutrient fertilizers on the production of MR 219 rice (*Oryza sativa* L.).

ABSTRACT

Poor management of plant nutrients and ignorance of the Liebig's Law of Minimum for plant nutrients requirement is an obstacle in efforts to increase rice production in Malaysia. Ignorance of the importance of micronutrients application by Malaysian farmers hinders the achievement of high yields in rice production. Six farmers' plots were used to examine the importance of micronutrients in rice production in Sawah Sempadan, Tanjong Karang, Malaysia. Soil and foliar samples were collected and analyzed to determine the micronutrients content and then compared with the critical nutrients levels needed by rice. Special fertilizers comprising formulated mixture of K, Mg, Zn, Cu, Mn and B were then distributed to farmers along with a recommended manuring programme. The timing and quantity of fertilizer applied were closely supervised. The investigations were carried out over two continuous seasons where rice yield data were collected and subjected to statistical analysis. The results showed that the application of special fertilizers in conjunction with proper field maintenance was able to increase rice production by 27%, from 4.62 tonnes per hectare to 5.87 tonnes per hectare.

Keyword: Fertilizer; Law of Minimum; Micronutrients; Rice