

ABSTRACT

THE EFFECT OF DOSAGES OF MICRO-NUTRIENT FERTILIZER ON THE SEED VIGOR OF TWO VARIETIES OF RICE (*Oryza sativa* L.) AFTER BEING STORED AT CERTAIN PERIODE

By

Krisna Aji Hutomo

One way to increase rice development is to use high yielding varieties.

Fertilization is one of the important requirements in supporting plant growth. The growth of rice can still be optimized by providing an additional element such as micro-nutrients. This study aims to determine the effect of (a) dosage of micro-nutrient fertilizer in rice seed vigor (b) differences in vigor between the two rice varieties, and (c) giving different of micro-nutrient fertilizer in rice seed vigor resulting in two rice varieties Mayang and Mira-1.

This research was conducted at the Laboratory of Seed and Plant Breeding Faculty of Agriculture, Lampung University in December 2009 to August 2010. The design of treatment arranged in a factorial (2x3) was randomized in that design. The experimental design used split plot design in randomize completely block design with three replicating. The main plot was the dosages of micro-nutrient fertilizer dose of (0 kg/ha, 1 kg/ha, and 2 kg/ha). The subplots were varieties, (Mayang and Mira).

The results of this research indicated that: (1) micro-nutrient fertilizer 1kg/ha showed a higher seed vigor than with the others which was indicated by total normal germination after being stored for 0, 2, 4, and 8 months; the germination rate of seeds after being stored for 2 months, (2) Mayang showed a higher seed vigor than Mira indicated by normal seedling dry weight after being stored for 8 months; electrical conductivity after being stored for 4, 6, and 8 months; normal germination after being stored for 0, 4, 6, and 8 months; water content after being stored for 8 months; the speed of seed germination after being stored for 4, 6, and 8 months; normal germination after being stored for 6 months, and primary root length after being stored for 8 months; (3) For the variety of Mayang, the dosage of fertilizer did not affect the seed vigor, on the other hand for the variety of Mira, the dosage of 1 kg/ha showed the highest vigor.