ABSTRACT

GROWTH OF MAHOGANY (*Swietenia macrophylla*) WITH APPLICATION OF FERTILIZATION AND SOLAR RADIATION INTENSITY

by

Westi Ulvia

Mahogany was a plant that grows fast. Some of the factors that affect plant growth were nutrients and solar radiation intensity. In order to supply information on the techniques of mahogany seedlings, then do research on the growth of seedlings of mahogany (*Swietenia macrophylla*) in some stage of fertilization treatment and the intensity of solar radiation. The are of this study of determine the growth response to treatment fertilization and mahogany shade. The study was conducted in June to September 2011 the greenhouse. The study was designed in randomized block design (RBD) with 4 groups and 4 treatment. Group in this study is the provision of shade 0%, 40%, 60%, and 80%, whereas the treatment in this study is the provision of inorganic NPK fertilizer with a concentration of 0 g/polybag, 1g/polibag, 2g/polibag, and 3g/polibags. Similarity range tested with Bartlett test, and data were analyzed by variance, and comparisons made using the average value of the smallest real difference test (RDT) and orthogonal comparisons at the level of 5%. The results of this study was NPK fertilizer dose of 2g/polybag gives the best effect of the increment of 1.16 mm diameter seeds, and DWT of 3.94 g/seed. Group with no shade to give the best effect of 3.34 mm diameter Cosmos, and increase diameter of 1.33 mm.

Key words: mahogany, NPK fertilizer, the intensity of day light.