

**GROWTH PERFORMANCE OF *Mucuna bracteata* BY SEED AND STEM
CUTTING PROPAGATION**

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DECLARATION

This Final Year Project is a partial fulfillment of the requirements for a degree of Bachelor of Science (Hons.) Plantation Technology and Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

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ABSTRACT

Cover crop is important for the plantation industry in Malaysia especially for oil palm and rubber plantation due to its high drought tolerance, efficient control against weed, high biomass production and tolerant to pest and diseases. At present, plantation industry had faced problem because the seed of *Mucuna bracteata* as a cover crop is becoming more expensive, that is about RM280/kg. This is because the seed of *M. bracteata* need to be imported from other countries like India and need to apply permit from the Department of Agriculture (Quarantine Department), Malaysia. In order to solve this problem, the study about *M. bracteata* propagation by seed and stem cutting has been carried out to determine the growth performance of propagation of *M. bracteata* in a peatmoss medium. According to the result obtained, all the crop that propagate through the seed, semi-hardwood and hardwood cutting are growing successfully and the crop prior to planting into the fields. From the results obtained, it showed there is no significant different in term of number of leaves and the number of shoots between the treatments. It means that, the objective of this experiment that was to measure the viability and growth performance of *M.bracteata* through stems cutting and seed propagation were achieved. While, in term of length of root and leaf area index (LAI), the result had showed there was significant different between the treatment. The seed propagation as a treatment one has the higher average of the length of roots and leaf area index (LAI) compared to the semi-hardwood and hardwood propagation. This study will help the oil palm and rubber industry to maximize their profit by reducing the cost to buy seeds of *M. bracteata*. Besides that, the documentation of this research can provide information to farmers about the suitable technique and methods regarding the propagation of *M. bracteata* either by seed or stem cutting.