

**UNDERGRADUATE THESIS**

**EFFICIENCY OF INORGANIC FERTILIZER USE ON POTENTIAL  
LEGUMINOSAE COVER CROP SPECIES AT THE OIL PALM PLANTATION OF  
DHARMASRAYA REGENCY**



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## ABSTRACT

The regular use of inorganic fertilizers on oil palm plantations has a lot of negative effects, hence the most effective species of Leguminosae Cover Crop (LCC) is needed to reduce the use of inorganic fertilizers. The purpose of this research is to determine the most effective LCC species used in oil palm plantations at Dharmasraya Regency. The methods used in this research were observing seed germination, measuring biomass treatment using destructive methods, and measuring soil nitrogen levels using the kjeldahl method. The results showed that based on seed germination aspect, there was no significant difference in each treatment ( $p > 0.05$ ), while based on the amount of biomass there was significant difference in each treatment ( $p < 0.05$ ), *Mucuna bracteata* (3,60 gr) had the highest level of effectiveness. Analysis of soil Nitrogen content showed that the treatment of *Mucuna bracteata* (0,22%) and *Centrosema pubescens* (0,21%) were effective to use as cover crops. Thus, the most effective species of Leguminosae Cover Crop on oil palm plantations in Dharmasraya Regency is *Mucuna bracteata* (MB) species.

**Keyword:** Biomass, *Centrosema pubescens*, germination, kjeldahl, nitrogen, *Mucuna bracteata*

