

**Evaluation of *Eucalyptus pellita* F. Muell. Second-Generation Progeny Test
Seedling Seed Orchards Based on 6 Months Age of Tree Height in Wonogiri,
Central Java**

By :

Setyo Budhi Raharjo¹
Arif Nirsatmanto²
Mochammad Na'iem³

ABSTRACT

The Second Generation Progeny Test of Seedling Seed Orchards (KBSUK) *Eucalyptus pellita* F. Muell. was established in Wonogiri, Central Java. It was established by employing RCBD (Randomized Complete Block Design), with 6 replications, 5 treeplot and 4 x 1,5 meter spacing. The total number of tested family is 60 families which consists of 49 families from plus tree selected in the first generation seed orchards (improved families), and 11 infused families (unimproved families). The traits measured in this study are survival rate and total of tree height in the 6 month of age. The estimated genetic parameters are heritability and realized genetic gain. The realized genetic gain was calculated as percentage increase of improved families (selected plus trees) over unimproved ones (infused families). Survival rates until 6 month of age is approximately 84,36 %. Variation among the tested family showed very obvious difference. The estimation of individual heritability for tree height is about 0,29, while the family heritability is about 0,79. The growth of tree height among the families from the first generation of plus trees and infused families are very apparent difference with the value of realized genetic gain was 20,74 %.

Key word : Seedling Seed Orchards Progeny Test, second generation, *Eucalyptus pellita* F. Muell., heritability, realized genetic gain.

¹Student of Faculty of Forestry, Gadjah Mada University

²Researcher of Center for Plantation Forest Research and Development, Yogyakarta

³Professor of Tree Improvement in Faculty of Forestry, Gadjah Mada University

