# DETERMINING TIMBER YIELDS FOR DIFFERENT COMERCIAL PURPOSES OF *ACACIA MANGIUM* PLANTATION IN NORTHEAST VIETNAM

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**Summary**

It is important to classify and determine the yield of different wood products, thereby estimating the economic value of plantations. This study determined the yield, length and volume of each log with varied top diameters of *Acacia mangium* in the northeast region. The results, from 42 standard plots of 3 models, namely plantations for small logs, plantations for large timber and plantations transformed from small logs to large timber (referred as transformed plantations), are as follows: At the same site and age class, growth indicators reached the highest value in the model of transformed plantations; the proportion of sawn timber products (D≥15 cm) was higher in the transformed plantation model than the other two models at the same age and site conditions; the proportion of wood products by top diameter at different ages was markedly different. If harvested for commercial purposes, it is recommended that plantations at the age of 3 - 5 be harvested for woodchips (plantations with the highest ratio of wood products with top diameter of 5 – 10 cm); at the age of 6 - 9, for laminated veneer lumber or normal plywood (plantations with the highest ratio of wood products with top diameter of 10 – 15 cm); from the age of 10, for sawn timber for the production of furniture (plantations with the highest ratio of wood products with top diameter greater than 15 cm); for the northeast region, to achieve the percentage of large timber (D≥15 cm) above 70%, the business rotation must be over 13 years. Allometric equations between length of logs, volume of wood products and diameter at breast height showed strong and very strong correlations. These equations are quite simple and convenient to use. In the *Acacia mangium* plantation business, it is possible to measure the length and yield of merchantable timber for different commercial purposes by measuring the diameter of trees.

**Keywords:** *Acacia mangium, timber commercial, increament, yield, North East Vietnam.*