

Artit Choiraioi 2014: A Study of the Growth and Yield of Teak Using Dendrochronological Techniques in Huai Thak Plantation, Ngao District, Lampang Province. Master of Science (Forest Resource Management), Major Field: Forest Resource Management, Department of Forest Management. Thesis Advisor: Assistant Professor Khwanchai Duangsathaporn, Ph.D. 77 pages.

The objective of this study focused on growth and yield of teak in Huai Thak Plantation, Ngao District Lampang Province. The timber core samples were collected in different three age-classes and site conditions having age between 57 and 67 years by using the increment borer. The Dendrochronological technique and prediction technique were applied coherently to investigate growth and yield models. The regression analysis has been applied for forecasting the growth and yield as a merchantable volume table.

The results indicated that diameter increments of teak in three planted year; 1944, 1952 and 1954 had current annual increment (CAI) between 0.604 to 10.197 millimeters. and had mean annual increment (MAI) between 2.390 to 5.337 millimeters. The best regression equation for forecasting diameter growth, diameter at breast height (dbh), of teak was expressed. As a power equation, where as the equation for estimating merchantable volume per tree of teak same was a power equation using data on dbh. In 2011, the merchantable volume of planted year 1944, 1952 and 1954 were 23.39, 17.87 and 18.35 m.²/rai respectively. In 2041, the merchantable volume is expected to be 49.84, 34.80 and 50.22 m.²/rai respectively. This study shows growth and yield of teak in individual plots. Therefore, the result can be used to make the merchantable volume table per area of forest stand in periods and prediction for growth and yield of teak plantation.

Student's signature

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