

Surasak Phatsong 2010: Use and Growing Stock of *Dendrocalamus membranaceus* Munro: A Case Study of Huai Mae Hin Forest, 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. 72 pages.

The objectives of this research were to study use and growing stock of *Dendrocalamus membranaceus* Munro in approximate area 1,500 rai of Huai Mae Hin Forest by using the interviewing method for 89 household samples to study quantity and pattern the use both of culms and bamboo shoot, and using line plot system for growing stock assessment of culms in the forest. The study results showed that 51 households or 57.3 percents harvested 87,187 culms. This amount could be divided into self-consumption and selling. For self-consumption, there were 16 households with total amount of 3,875 culms per year or 242 culms per household per year, and for selling, there were 35 households with total amount of 83,312 culms or 2,381 culms per household per year. The major harvesting season was from January to April or 56.9 percents, and the largely age that villagers harvested was about 2 years old culms or 60.8 percents. In general, 90.2 percents of culms will be cut from outside to inside of clump. The shoot utilization showed in 50 households or 56.18 percents of household samples that there were harvested 35,168 shoots per year. This amount could be divided into self-consumption 7,528 shoots and for selling 27,640 shoots. In general, 60 percents of bamboo shoot were harvested from July to August.

The result of growing stock inventory of *Dendrocalamus membranaceus* Munro culms showed average density were 33 clumps per rai, 374 culms per rai, and amount of growing stock assessment was more than 560,338 culms. This amount could be divided by age; less than one, one, two, three, and more than three years old; there were 7,685, 108,966, 154,666, 177,996 and 111,025 culms respectively. Moreover, the dead bamboo was 148,628 culms.

The study results of Huai Mae Hin Forest potential and annual increment to support the community demand found that the annual increment was 42,853 culms per year which lower than community use or only 49.2 percents of community use. This cause is affected to Huai Mae Hin Forest's status could not afford the demand of community use sufficiently.

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Student's signature

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Thesis Advisor's signature