

## Abstract

The objectives of this study were (i) surveying bamboo species and their utilization in highland area, (ii) collecting bamboo species by seedling propagation, (iii) studying for management practices to increase bamboo productivity and quality, (vi) studying for harvest of rattan shoot cutting, and (v) studying for postharvest handling of rattan cane.

The results showed that (i.i) 44 bamboo species were found (14 cultivated and 30 natural existing species) and utilized in 23 highland areas. The highest number of species were found in Wang Pai, with 20 species while the lowest was 8 species were found in 3 areas (Pan Hin Fon, Sob Khong and Klong Lan (i.ii) The growth rate of bamboo cultivated by seeding was highest in Pai Hok (*Dendrocalamus brandisii* (Munro) Kurz.) with average maximum trunk 0.8 mm per month whereas the maximum tillering was found in Pai Sang Par (*Dendrocalamus membranaceus* Munro.) with 0.31 tillers per month. The number of tillers was highest in Pai Waan Ang-Khang (*Dendrocalamus latiflorus*) with 17 tillers per clump. Bamboo seeds were collected for propagation in 5 species namely, Pai Sang Par (*Dendrocalamus membranaceus* Munro.), Pai Tong (*Dendrocalamus asper* (J.H.Schultes) Backer ex K.Heyne), Pai Pork nan (*Dendrocalamus copelandii*), Pai Ruak (*Thyrsostachys siamensis* Gamble) and Pai Rai (*Gigantochloa albociliata* (Munro) Kurz.) (i.iii) The cultivation management by thinning and organic fertilizer applications resulted in better growth of Pai Bong Wan (*Bambusa cf. burmanica* Gamble.) by mean of average maximum tillering was 0.88 tillers per month, whereas Pai Sang Mon (*D. sericeus* var. *latifolius* A. Camus.) had average maximum trunk for 1.6 mm per month (i.iv) Sprouting new shoots of rattan had no significant differences between cutting management with average 4 shoots per clump. However, cutting treatment resulted in bigger and longer trunk than no cutting. (i.v) The postharvest handling of rattan cane to prevent the destruction of fungus were sun dry without peeling or soaking in 100% wood vinegar, then drying prior to storage in the shade and dried conditions.