

## Abstract

The objectives of this study were (1) study on appropriate utilization of bamboo species related to community (2) product development for value creation and generating income (3) selecting of bamboo cultivated by seeding for seedling productions (4) conservation and restoration of bamboo species for sustainable utilization.

The results showed that (1) The utilization of bamboo culm was classified as (1.1) Using as materials for greenhouse construction, which Phai Bong Yai (*Dendrocalamus brandisii* (Munro) Kurz) was easier decay and destroy by bamboo borer than Phai Sang Par (*D. membranaceus* Munro). However, soaking bamboo culm before using can reduce decomposition and prevent from bamboo borer infested. Moreover, the used of black plastic wrapping and pouring cement at the base of bamboo pole can increase the strength of the greenhouse. (1.2) Using for furniture productions (e.g. sofa set, bed, bamboo carriage and TV shelf), such as Phai Hok (*Dendrocalamus hamiltonii* Nees & Arnott ex Munro), Phai Sang Par (*D. membranaceus* Munro) and Phai Liang (*Thyrsocalamus liang Sungkaew* & W.L.Goh). (2) The bamboo scraps can be produced as tea pot, bamboo mug and spoon instead of plastic products. Charcoal from bamboo culm also used as fuel for cooking, and odor absorbing materials. (3) Selection of bamboo cultivated by seeding were (3.1) The 10 species of bamboo cultivated by seeding were propagated namely, Phai Hok (*D. hamiltonii* Nees & Arnott ex Munro), Phai Sang Par (*D. membranaceus* Munro) and Phai Liang (*T. Sungkaew* & W.L.Goh), Phai Wan Angkhang (*Dendrocalamus latiflorus*), Phai Mon Moo (*Dendrocalamus copelandii*), Phai Sang Mon (*Dendrocalamus sericeus* var. *latifolius* A. Camus), Phai Tong Dum (*Dendrocalamus asper*), Pai Ruak (*Thyrsostachys siamensis* Gamble), Pai Ruak Dum (*Thysostachys oliveri* Gamble), Pai Phao Par (*Dendrocalamus giganteus* Munro). (3.2) The growth of 8 bamboo species cultivated by seeding (1 year after planting) at the Pang Da Royal Agricultural Station showed that, the highest number of culms was found in Phai Rai (*Gigantochloa auriculata* Kurz) with 4 culms/clump. The biggest culm was found in Phai Tong Dum (*D. asper*) with average 15.65 mm. The highest culm was found in Phai Liang (*T. liang Sungkaew* & W.L.Goh) with 2.93 meters. (4) Conservation and restoration of 7 bamboo species for sustainable utilization in 10 communities.