

## Abstract

The objectives of this study were (i) surveying the species diversity of bamboo in 33 Highland Development Project Using Royal Project System (ii) selecting bamboo species appropriate for utilization of the community (iii) growth study of bamboo cultivated by seeding and (iv) developing collection of bamboo genetic resources cultivated from seeding

The results showed that (i) There were 13 genus 50 species of bamboo had been grown naturally, planted and utilized in 45 communities of highland areas. (ii) Bamboo species which suitable for shoot consumption such as Phai Wan Angkhang (*Dendrocalamus latiflorus*), Phai Kim Sung (*Bambusa beechyana* Munro), Phai Yok (*Bambusa oldhamii*), Phai Bong Wan (*Bambusa* cf. *burmanica* Gamble), Phai Hok (*Dendrocalamus hamiltonii* Nees & Arnott ex Munro), Phai Tong (*Dendrocalamus asper*), Phai Bong Yai (*Dendrocalamus brandisii* (Munro) Kurz), Phai Rai (*Gigantochloa auriculata* Kurz), etc. Bamboo species that are suitable for use in craft such as Phai Bong Bang (*B. nutans* Wall. Ex Munro), Phai Bong Par (*B. tulda* Roxb), Phai Sang Par (*D. membranaceus* Munro), Phai See Sunk (*B. blumeana* Schult.f.), Phai Khao Lam (*Schizostachyum pergracile* (Munro)), etc. and suitable for use in construction such as Phai Tong (*D. asper*), Phai Hok (*D. hamiltonii* Nees & Arnott ex Munro), Phai Bong Yai (*D. brandisii* (Munro) Kurz), Phai Sang Mon (*D. sericeus* var. *latifolius* A. Camus), Phai Sang Par (*D. membranaceus* Munro), Phai Bong Par (*B. tulda* Roxb), Phai sang Jeen (*D. barbatus* Hsueh & D.Z.Li), Phai Pok (*D. sp.*), etc. The 3 species of bamboos such as Phai Bong Yai (*D. brandisii* (Munro) Kurz), Phai Pok (*D. sp.*) and Phai sang Jeen (*D. barbatus* Hsueh & D.Z.Li) had potential for building materials instead of wood. (iii) The growth in diameter at breast of 3 and 2 years old culm was highest in Phai Hok (*D. brandisii* (Munro) Kurz.) with average maximum 32.30 and 45.33 mm., whereas the maximum diameter at breast of 1 years old culm was found in Phai Mon Moo (*D. copelandii*) with 49.11 mm. The highest average number of culm per clump was found in Phai Wan Angkhang (*D. latiflorus*) with 32 culms. (iv) The 8 species of bamboo species such as Phai Tong Dum (*D. asper*), Phai Sang Mon (*D. sericeus* var. *latifolius* A. Camus), Phai Sang Par (*D. membranaceus* Munro), Phai Hok (*D. hamiltonii* Nees & Arnott ex Munro), Phai Rai (*Gigantochloa auriculata* Kurz), Phai Bong Wan (*B. cf. burmanica* Gamble) and Phai Liang (*Thyrsocalamus liang* Sungkaew & W.L.Goh) were planting at the Pang Da Royal Agricultural Station (700-800 MSL.) for genetic resources collection study. The total area was 2 hectares, which 4 meters growing space.