

## **Evaluation of Clones of *Casuarina junghuhniana* in Thailand**

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### **Abstract**

Twenty-nine outstanding individuals of *Casuarina junghuhniana* selected from a provenance/progeny trial planted in Thailand were subjected for clonal evaluation test. These individuals included of 23 from Indonesia (Bali, Java, Timor and Wetar) and 6 from Kenya. The local commercial hybrid *C. junghuhniana* x *C. equisetifolia* was included as control. Eleven of these trees were male and 17 were female, 2 had no sex expression. The selected trees were propagated by marcottage and subsequently multiplied by rooted cuttings for use as planting material. The experiment was laid out in a randomized complete block design with 6 replicates, 6 (2x3) trees per plot, and 3m x 2m spacing. The trial planted in August 2008 was located at Saiyoke, Kanchanaburi province (latitude 14° 22'N, longitude 98° 56'E, altitude 370 m). The area receives a mean annual rainfall of 1500 mm with a mean temperature of 25.7 °C. The soil is clay loam with pH 5-6. Height and diameter at breast height have been assessed annually. Tree form (axis persistence and stem straightness), branching habit (density, angle and thickness) and flowering were assessed by scoring when trees were 4 years old. Growth data assessed at age 4 years were subjected to an analysis of variance. There were highly significant differences ( $P < 0.001$ ) in all the growth parameters assessed. No correlations between sex of the clones and general growth performance were observed. Based on growth and stem form, seven clones (1 Bali, 4 Wetar and 2 Kenya) were considered suitable for plantation establishment.