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## The effects of abscisic acid and sorbitol on the slow growth *in vitro* preservation of Mahesak (*Tectona grandis* L.)

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**Abstract** The conservation of teak (*Tectona grandis* L.) by slow growth was proceeded out to determine appropriate methods *in vitro* preservation using osmotically active compounds and growth retardants. Calli and node explants were cultured on Murashige and Skoog (MS) and Woody Plant Medium (WPM) media supplemented with 1, 2 and 3 mg · L<sup>-1</sup> abscisic acid (ABA) containing 30 g L<sup>-1</sup> sucrose and hormone-free MS and WPM media containing 0.1, 0.2 and 0.3 M sorbitol for reduced the growth rate. Result showed that preservation of calli on MS and WPM media supplemented with 0.2 and 0.3 M sorbitol and node explants were cultured on WPM medium supplemented with 0.2 and 0.3 M sorbitol inhibited the growth and maintained the quality of calli and node explants for 12 weeks. It was found that ABA could not inhibit the growth rate after cultures for 12 weeks. Callus and node explant survival from slow growth preservation were able to regrowth which successfully (100%) tested on WPM medium supplemented with 0.25 mg L<sup>-1</sup> 6-benzylaminopurine (BAP) containing 30 g L<sup>-1</sup> sucrose after for 2 weeks.

**Keywords:** Growth retardants, Mahesak (Teak), Preservation, Slow growth, *Tectona grandis* L.

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