

## **Pematahan Dormansi Benih dan Pertumbuhan Bibit Jati Emas (*Tectona grandis*) Dengan Perendaman Air Panas, H<sub>2</sub>SO<sub>4</sub>, dan Skarifikasi.**

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### **ABSTRAK**

Jati merupakan salah satu jenis tanaman hutan industri (HI) yang saat ini dikembangkan di berbagai daerah baik oleh pemerintah, pihak swasta maupun masyarakat. Tanaman jati pada umumnya diperbanyak melalui benih, tetapi germinasi benih sering mengalami kendala disebabkan karena benih jati yang mempunyai kulit benih yang keras, sehingga sulit untuk ditembus air. Permasalahan ini dapat diatasi dengan skarifikasi mekanik dan kimiawi, namun cara yang paling efektif belum ditemukan sehingga masih perlu dilakukan penelitian lebih lanjut. Skarifikasi mekanik berupa pengamplasan dan kimiawi terdiri dari perendaman dengan air panas, dan perendaman dalam larutan H<sub>2</sub>SO<sub>4</sub>. Penelitian ini dilakukan untuk memperoleh perlakuan yang paling baik untuk pematihan dormansi benih jati dan pertumbuhan bibit benih jati. Penelitian dilakukan di rumah kaca dengan menggunakan rancangan percobaan Rancangan Acak Lengkap satu faktor yang terdiri atas 10 perlakuan yaitu: D<sub>1</sub> Perendaman air panas 70<sup>0</sup>C 45 menit; D<sub>2</sub> Perendaman air panas 60<sup>0</sup>C 45 menit; D<sub>3</sub> Perendaman H<sub>2</sub>SO<sub>4</sub> 70% 30 menit; D<sub>4</sub> Perendaman H<sub>2</sub>SO<sub>4</sub> 60% 30 menit; D<sub>5</sub> Perendaman H<sub>2</sub>SO<sub>4</sub> 50% 30 menit dan perendaman air panas 60<sup>0</sup>C 45 menit; D<sub>6</sub> pengamplasan; D<sub>7</sub> pengamplasan dan perendaman H<sub>2</sub>SO<sub>4</sub> 70% 30 menit; D<sub>8</sub> pengamplasan dan perendaman air panas 60<sup>0</sup>C 45 menit; D<sub>9</sub> pengamplasan dan perendaman air panas 60<sup>0</sup>C 45 menit dan perendaman H<sub>2</sub>SO<sub>4</sub> 70% 30 menit; D<sub>10</sub> Kontrol. Masing - masing perlakuan diulang 4 kali. Hasil penelitian menunjukkan dari 10 perlakuan yang terbaik adalah pada perlakuan D<sub>3</sub> yaitu perendaman larutan H<sub>2</sub>SO<sub>4</sub> selama 30 menit dan hasil terendah pada perlakuan D<sub>9</sub> yaitu dengan pengamplasan dikombinasikan dengan air panas suhu awal 60<sup>0</sup>C kemudian direndam pada larutan H<sub>2</sub>SO<sub>4</sub> konsentrasi 70% selama 30 menit.

Kata kunci : benih jati, dormansi, skarifikasi mekanik dan kimiawi.

**Dormancy Breaking Treatments and Seedling Growth for Golden Teak Seed  
(*Tectona grandis*) by Hot Water Immersion, H<sub>2</sub>SO<sub>4</sub>, and Scarification.**

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**ABSTRACT**

Teak is a type of industrial forest (Hutan Industri/HI) plant species which is currently developed by the government, private parties, and the people in various areas of Indonesia. Teaks generally propagates through seeds, however seed germinations are oftentimes constrained by the teak's hard shelled seeds, thus making it difficult for water to penetrate. This constraint can be solved by methods of mechanical or chemical scarification, yet, the most effective way has not been found so further researches are necessary. Mechanical and chemical scarification consists of treatments by hot water immersion, sanding, and H<sub>2</sub>SO<sub>4</sub> solution immersion. This study was conducted to learn about the which treatment are best used for teak seedlings' dormancy breaking and growth of teak seedlings. All tests were done in a greenhouse and by using a Single Factor Completely Randomized Design with 10 treatments: D<sub>1</sub> hot water immersion 70<sup>0</sup>C for 45 minutes; D<sub>2</sub> hot water immersion 60<sup>0</sup>C for 45 minutes; D<sub>3</sub> H<sub>2</sub>SO<sub>4</sub> solution immersion 70% for 30 minutes; D<sub>4</sub> H<sub>2</sub>SO<sub>4</sub> solution immersion 60% for 30 minutes; D<sub>5</sub> H<sub>2</sub>SO<sub>4</sub> solution immersion 50% for 30 minutes and hot hater immersion 60<sup>0</sup>C for 45 minutes; D<sub>6</sub> sanding; D<sub>7</sub> sanding and H<sub>2</sub>SO<sub>4</sub> solution immersion 70% for 30 minutes; D<sub>8</sub> sanding and hot water immersion 60<sup>0</sup>C for 45 minutes; D<sub>9</sub> sanding and hot water immersion 60<sup>0</sup>C for 45 minutes and H<sub>2</sub>SO<sub>4</sub> solution immersion 70% 30 minutes; D<sub>10</sub> controlling. Each treatment was repeated 4 times. The result of the study showed that 10 of the best treatments was on the D<sub>3</sub> treatment, H<sub>2</sub>SO<sub>4</sub> solution immersion 70% for 30 minutes and the lowest yield on the D<sub>9</sub> TREATMENT IS BY sanding combined with hot water immersion 60<sup>0</sup>C for 45 minutes and H<sub>2</sub>SO<sub>4</sub> solution immersion 70% 30 minutes.

Keywords : teak, teak seed, dormancy, mechanical and chemical scarification.