

Peran Jarak Tanam terhadap Pertumbuhan dan Kompetisi *Acacia Crassicarpa* di KHDTK Wanagama

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INTISARI

Acacia crassicarpa adalah salah satu jenis tanaman yang direkomendasikan untuk pembangunan Hutan Tanaman Industri, salah satu diantaranya adalah industri *pulp* dan kertas. Pengaturan jarak tanam adalah salah satu tindakan silvikultur untuk mengatur kerapatan agar produk akhir yang dihasilkan menjadi optimal dan sesuai dengan tujuan pengelolaan hutan. Penelitian ini bertujuan untuk mengetahui pengaruh jarak tanam terhadap karakteristik pertumbuhan tinggi, diameter, dan tinggi batang bebas cabang serta indeks kompetisi *A. crassicarpa* umur 28 bulan. Penelitian ini dilakukan di petak 14 KHDTK Wanagama dengan menggunakan rancangan *Randomized Completely Block Design* (RCBD). Perlakuan pengaturan jarak tanam terdiri dari 4 taraf dan 3 blok sebagai ulangan dengan bentuk plot *square plot* 5 x 5 tanaman. Hasil penelitian menunjukkan bahwa pengaturan jarak tanam berpengaruh terhadap pertumbuhan tinggi, diameter, dan indeks kompetisi *A. crassicarpa* umur 28 bulan. Akan tetapi jarak tanam tidak berpengaruh nyata terhadap tinggi bebas cabang. Pertumbuhan tinggi, diameter, dan tinggi bebas cabang terbaik adalah jarak tanam 3 x 3 m dengan nilai masing-masing $4,41 \pm 0,36$ m; $4,96 \pm 0,36$ cm dan $2 \pm 0,18$ m. Hasil penelitian ini lebih rendah dibandingkan pengukuran pada beberapa lokasi khususnya di hutan tanaman industri (HTI) di pulau Sumatera yang cenderung mempunyai tanah lebih asam dibandingkan di lokasi penelitian. Nilai indeks kompetisi yang optimal adalah pada jarak tanam 4 x 4 m dengan nilai 1,28. Meskipun begitu, jarak tanam 3 x 3 m lebih direkomendasikan untuk *A. crassicarpa* karena nilai pertumbuhan tanaman lebih optimal dibandingkan jarak tanam lainnya.

Kata kunci: *Acacia crassicarpa*, jarak tanam, karakteristik pertumbuhan, indeks kompetisi.

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The Role of Plant Spacing in Growth and Competition *Acacia Crassicarpa* in KHDTK Wanagama

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ABSTRACT

Acacia crassicarpa is one type of species recommended for establishment of forest plantations, especially for the pulp and paper industry. Spacing as the silvicultural treatment is to regulate density of forest plantation to obtain the optimal of final forest product in accordance with the forest management objectives. This research aims to determine the effect of spacing on the growth characteristics in term tree height, diameter, the bole height and the competition index of *A. crassicarpa* in 28 months after planting.

This research was conducted in 14's compartment of KHDTK Wanagama using a Randomized Complete Block Design (RCBD). The spacing treatment consisted of 4 levels and 3 blocks as replications in the form of a square plot of 5 x 5 plants. The results showed that spacing had an effect on growth in height, diameter and competition index of *A. crassicarpa* in 28 months after planting. The results showed that spacing had an effect on growth in height, diameter and competition index of *A. crassicarpa* in 28 months after planting. However, plant spacing did not have a significant effect on tree bole height. The best growth of spacing for was the height, diameter and tree bole height are 3 x 3 that were 4.41 ± 0.36 m; 4.96 ± 0.36 cm and 2 ± 0.18 m, respectively. The results of this research are lower than other locations, especially in industrial forest plantations (HTI) on the island of Sumatera because they have soil acid than in our research location. The optimal competition index value is at spacing of 4 x 4 m that is 1.28. However, spacing of 3 x 3 m is recommended for *A. crassicarpa* plantation because it is the highest of all of the growth parameter of other spacing.

Keywords: *Acacia crassicarpa*, spacing, characteristic of growth, competition index.

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