PENGARUH PANJANG APOKOL DAN KEDALAMAN TANAM TERHADAP PERTUMBUHAN KECAMBAH AREN (*Arenga pinnata* Merr.) DI *PRE-NURSERY*

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Abstrak

Tanaman aren (*Arenga pinnata* Merr.) merupakan tanaman dengan potensi yang besar dari segi agribisnis, namun dalam budidayanya masih mengandalkan tanaman aren yang tumbuh liar. Oleh sebab itu, diperlukan upaya budidaya yang berfokus pada peningkatan kualitas pertumbuhan aren sejak fase perkecambahan hingga pembibitan awal (*pre-nursery*). Penelitian ini bertujuan untuk mengetahui interaksi antara berbagai panjang apokol dan kedalaman tanam untuk mendapatkan panjang apokol pada kedalaman tanam terbaik bagi pertumbuhan kecambah aren di *pre-nursery*. Penelitian dalam bentuk percobaan telah dilaksanakan di Laboratorium Fisiologi Tumbuhan dan Kebun Percobaan, Fakultas Pertanian, Universitas Andalas, Padang, Sumatera Barat. Penelitian ini dilakukan secara eksperimental dengan Rancangan Acak Lengkap (RAL) Faktorial dengan faktor pertama sebanyak 4 taraf panjang apokol yaitu L< 2 cm, 2 cm< L < 3 cm, 3 cm< L< 4 cm, dan L> 4 cm; dan faktor kedua sebanyak 3 taraf kedalaman tanam yaitu 1 cm, 2 cm, dan 3 cm. Terdapat 12 taraf perlakuan yang masing-masing diulang sebanyak 3 kali. Data hasil pengamatan dianalisis melalui uji F pada taraf nyata 5% , jika F hitung lebih besar dibandingkan dengan F tabel maka dilanjutkan dengan uji DNMRT (*Duncan's New Multiple Range Test*) pada taraf nyata 5%. Hasil menunjukkan bahwa terdapat interaksi antara kedua faktor pada variabel waktu muncul koleoptil, tinggi bibit, panjang koleoptil, bobot segar tajuk, bobot kering tajuk, dan rasio tajuk akar. Panjang apokol dengan ukuran panjang lebih dari 4 cm dengan kedalaman tanam 1 cm memberikan pertumbuhan kecambah aren terbaik di *pre- nursery*.

Kata kunci: aren, bibit, kecambah, kedalaman tanam, koleoptil, panjang apokol

THE EFFECT OF APOCOL LENGTH AND PLANTING DEPTH ON THE GROWTH OF SUGAR PALM (*Arenga pinnata* Merr.) SEEDLINGS IN THE PRE-NURSERY

Abstract

Sugar palm (*Arenga pinnata* Merr.) is a highly valuable crop with great agribusiness potential, but its cultivation still relies on wild sugar palm plants. Therefore, cultivation efforts are needed that focus on improving the quality of sugar palm growth from the germination phase to the initial nursery (pre-nursery). This study aims to determine the interaction between various apocol lengths and planting depths to identify the optimal apocol length for the best planting depth to promote the growth of sugar palm seedlings in the pre-nursery. The research. conducted as an experiment was conducted at the Plant Physiology Laboratory and Experimental Farm, Faculty of Agriculture, Andalas University, Padang, West Sumatra. This research was conducted experimentally with a Completely Randomized Design (CRD) Factorial with the first factor as many as 4 levels of apocol length: L < 2 cm, 2 cm < L < 3 cm, 3 cm < L < 4 cm, and L> 4 cm; and the second factor as many as 3 levels of planting depths: 1 cm, 2 cm, and 3 cm. There were 12 treatment levels, each repeated 3 times. Observational data were analyzed using the F-test at a 5% significance level. If the calculated F-value was greater than the table F-value, the Duncan's New Multiple Range Test (DNMRT) was used at a 5% significance level. The results showed an interaction between the two factors, affecting the variables of coleoptile emergence time, seedling height, coleoptile length, fresh shoot weight, dry shoot weight, and shoot-root ratio. An apocol length greater than 4 cm, combined with a planting depth of 1 cm, resulted in the best growth performance of sugar palm seedlings in the pre-nursery stage.

Keywords: apocol length, coleoptile, planting depth, seeds, sprouts, sugar palm