

ABSTRAK

POPULASI POHON AREN (*Arenga pinnata*) DAN KONDISI EKOLOGIS DI AREAL GARAPAN KELOMPOK TANI HUTAN HARAPAN BARU III DALAM TAMAN HUTAN RAYA WAN ABDUL RACHMAN

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Taman Hutan Raya Wan Abdul Rachman merupakan kawasan pelestarian alam di Provinsi Lampung yang memiliki jenis tumbuhan beragam, salah satunya Aren (*Arenga pinnata*). Aren merupakan salah satu spesies yang tumbuh alami di kawasan tersebut, namun informasi mengenai struktur populasi aren dan hubungannya dengan kondisi ekologis di lokasi tersebut masih terbatas. Penelitian ini bertujuan untuk menganalisis struktur populasi pohon aren serta hubungannya dengan kondisi ekologis di areal garapan Kelompok Tani Hutan Harapan Baru III. Metode yang digunakan adalah sampling garis berpetak dengan intensitas sampling 2,5% sehingga diperoleh 17 petak ukur pada lahan seluas 26 ha, dengan pembuatan plot 20×20 m, 10×10 m, 5×5 m, dan 2×2 m. Data yang dihimpun mencakup jumlah individu pohon aren tiap fase pertumbuhan serta kondisi ekologis yang meliputi ketinggian tempat, kemiringan lahan, keasaman tanah, intensitas radiasi matahari, kelembapan udara, dan temperatur udara. Lalu, dilakukan analisis densitas, frekuensi, uji regresi linier sederhana, dan uji korelasi Pearson. Densitas aren fase semai sebesar 11,8 individu/ha, fase muda sebesar 45,6 individu/ha, fase reproduktif sebesar 2,9 individu/ha, dan fase pasca produktif sebesar 2,9 individu/ha. Frekuensi aren fase semai sebesar 0,2, fase muda sebesar 0,5, fase reproduktif sebesar 2,9, dan fase pasca produktif sebesar 2,9. Hal tersebut mengindikasikan bahwa proses regenerasi alami aren di areal penelitian tergolong rendah. Selain itu, hasil analisis regresi dan korelasi menunjukkan tidak terdapat hubungan yang signifikan antara populasi aren dengan kondisi ekologis di areal tersebut.

Kata kunci: *Arenga pinnata*, korelasi, lingkungan, populasi, taman hutan raya.

ABSTRACT

POPULATION OF SUGAR PALM (*Arenga pinnata*) AND ECOLOGICAL CONDITIONS IN THE CULTIVATED LAND OF THE HARAPAN BARU III FOREST FARMERS GROUP IN WAN ABDUL RACHMAN FOREST PARK

By

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Wan Abdul Rachman Grand Forest Park is a nature conservation area in Lampung Province that has a variety of plant species, one of which is sugar palm (*Arenga pinnata*). Sugar palm is one of the species that grows naturally in the area, but information about its population structure and relationship with the area's ecological conditions is still limited. This study aims to analyze the population structure of sugar palm and its relationship with ecological conditions in the cultivation land of the Harapan Baru III Forest Farmers Group. The research used a rectangular line method with a sampling intensity of 2.5%, resulting in 17 plots on a 26 hectare area, plot sizes were 20×20 m, 10×10 m, 5×5 m, and 2×2 m. Collected data included the number of sugar palm individuals at each growth stage and ecological variables such as elevation, slope, soil pH, light intensity, air humidity, and air temperature. Then, density analysis, frequency analysis, simple linear regression tests, and Pearson correlation tests were conducted. The density for the seedling phase was 11.8 individuals/ha, the juvenile phase was 45.6 individuals/ha, the reproductive phase was 2.9 individuals/ha, and the post-productive phase was 2.9 individuals/ha. The frequency of the seedling phase was 0.2, the juvenile phase was 0.5, the reproductive phase was 2.9, and the post-productive phase was 2.9. This indicates that the natural regeneration process of palm trees in the study area is relatively low. Additionally, regression and correlation analysis revealed no significant relationship between the sugar palm population and ecological conditions in the area.

Key words: *Arenga pinnata*, corelation, environment, population, grand forest park.