Sebaran Produksi Daun Kayu Putih Pada Tiga Periode Pemanenan Di Kesatuan Pemangkuan Hutan Bojonegoro

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INTISARI

Pengembangan tanaman kayu putih di Kesatuan Pengelolaan Hutan (KPH) Bojonegoro memberikan kontribusi yang berarti untuk menjaga kelangsungan hidup perusahaan di masa depan ketika produktivitas jati menurun secara signifikan akibat dampak ekstraksi kayu ilegal. Budidaya kayu putih di KPH Bojonegoro dikembangkan mulai dari tahun 2016 pada tiga lokasi yang diprioritaskan, dan sudah dilakukan pemanenan pada tahun 2018, 2019, dan 2020. Namun evaluasi tentang produksi daun tanaman kayu putih di KPH Bojonegoro masih terbatas. Oleh karena itu, penelitian ini bertujuan untuk membandingkan produksi daun kayu putih pemanenan ketiga dan mendeskripsikan perkembangan produksi daun kayu putih dari tiga deret waktu periode pemanenan di KPH Bojonegoro.

Pengumpulan data dilakukan di tiga Bagian Kesatuan Pengelolaan Hutan (BKPH) prioritas pengembangan tanaman kayu putih. Petak ukur sementara (PUS) berbentuk persegi 20 x 20m dibuat sebanyak 9 PUS di setiap BKPH pada pola tanam plong-plongan tahun tanam 2016, tepatnya di petak 17a BKPH Clangap, 78c BKPH Nglambangan, 3c dan 8a BKPH Tengger. Data yang dikumpulkan tiap PUS yaitu: pertama, jumlah tanaman yang ada untuk dihitung persentase hidup. Kedua, pemanenan daun kayu putih sebanyak lima sampel tanaman, terdiri dari: dua diameter besar, satu diameter sedang, dan dua diameter kecil. Rerata lima sampel tanaman tersebut digunakan untuk estimasi berat produksi daun kayu putih pemanenan ketiga per hektar. Data sekunder produksi daun kayu putih pemanenan pertama dan kedua diperoleh dari *database* KPH Bojonegoro. Selanjutnya, data produksi daun kayu putih pemanenan ketiga antara tiga BKPH dibandingkan dengan ANOVA. Uji *Pearson-correlation* diterapkan untuk menguji hubungan antara persentase hidup dan produksi daun kayu putih. Perkembangan produksi daun kayu putih mulai dari pemanenan pertama sampai pemanenan ketiga pada ketiga BKPH dianalisis dengan analisis deskriptif. Akhirnya, analisis *Spearman-correlation rho* dilakukan untuk menilai hubungan antara produksi daun kayu putih dan periode pemanenan.

Hasil penelitian menunjukkan bahwa produksi daun kayu putih panenan ketiga tidak berbeda nyata antara ketiga BKPH ($P>0,05$). Antara persentase hidup dan produksi daun kayu putih terdapat korelasi yang signifikan ($P<0,05$) dengan nilai positif yang kuat sebesar 0,6942. Rata-rata produksi daun kayu putih ketiga BKPH pada pemanenan pertama (0,76 ton ha^{-1}) meningkat sebesar 3,15 ton ha^{-1} pada pemanenan kedua menjadi 3,91 ton ha^{-1}, selanjutnya meningkat lagi sebesar 5,41 ton ha^{-1} pada pemanenan ketiga menjadi 9,32 ton ha^{-1}. Antara periode pemanenan dan produksi daun kayu putih terdapat korelasi yang signifikan ($P<0,05$) dengan nilai positif yang sangat kuat sebesar 0,8771.

Kata Kunci: tanaman kayu putih, persentase hidup, periode pemanenan

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Distribution of Cajuput Leaves Production From Three Harvesting Periods in Bojonegoro Forest Management Unit

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ABSTRACT

The development of cajuput plantation in Bojonegoro Forest Management Unit (FMU) provides a meaningful contribution to maintain the future viability of company when the productivity of teak plantation declines significantly due to the impact of illegal timber extraction. Cajuput plantation in Bojonegoro FMU was developed starting from 2016 on three prioritized locations, and harvesting has been carried out in 2018, 2019 and 2020. However, the evaluation on the production of cajuput leaves in Bojonegoro FMU is still limited. Therefore, this study aims to compare the production of cajuput leaves for the third harvest and to describe the development of cajuput leaves production from three time series of harvesting periods in Bojonegoro FMU.

Data were collected from three different Sub-FMUs as the priority sites for cajuput development. Temporary measuring plots in the shape of 20 x 20m squares were established in the *plong-plongan* planting pattern 2016 planting year with a total of 9 temporary plots for each Sub-FMU, precisely in compartments 17a Clangap Sub-FMU, 78c Nglambangan Sub-FMU, 3c and 8a Tengger Sub-FMU. The data collected on each PUS were: firstly, the number of existing plants to calculate the survival rate and secondly, five harvested sampling plants covering two, one, and two for large, medium, and small diameter(s), respectively. The average of those five samples were used to estimate the weight of cajuput leaves production per hectare for the third harvest. The secondary data were the production of cajuput leaves for the first and second harvest obtained from the Bojonegoro FMU database. The production of the third harverst among three sites were compared by analysis of variance. Pearson-correlation test was also applied to examine the relationship between survival rate and leaves production. The development of cajuput leaf production from the first harvest to the third harvest in the three Forest Management Sub-Unit was analyzed by descriptive analysis. Moreover, analysis of Spearman-correlation rho was carried out to assess the relationship between leaves production and harvesting periods.

The results showed that there was not a significant different of cajuput leaves production from three sites (P>0.05). There was a significant correlation (P<0.05) between survival rate and cajuput leaves production with a strong positive value of 0.6942. The average production of the three Sub-FMUs cajuput leaves at the first harvest (0.76 ton ha^{-1}) increased by 3.15 ton ha^{-1} in the second harvest to 3.91 ton ha^{-1}, then increased again by 5.41 ton ha^{-1} on the third harvest to 9.32 ton ha^{-1}. There was a significant correlation (P<0.05) between the harvesting period and cajuput leaves production with a very strong positive value of 0.8771.

Keywords: cajuput plantation, survival rate, harvesting period

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