

PRODUKTIVITAS TANAMAN PADI BERDASARKAN PENGGUNAAN AIR KONSUMTIF DAN CURAH HUJAN DI KABUPATEN SUMBA TIMUR, PROVINSI NUSA TENGGARA TIMUR

INTISARI

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Produktivitas tanaman padi erat kaitannya dengan ketersediaan air, kondisi air yang terbatas pada lahan pertanian dapat mengakibatkan turunnya nilai produktivitas tanaman padi. Namun demikian, bukan berarti air yang berlimpah dapat menjamin peningkatan produktivitas tanaman. Penelitian ini bertujuan untuk mencari hubungan antara penggunaan air konsumtif tanaman dan curah hujan terhadap produktivitas padi di Kabupaten Sumba Timur. Bahan yang digunakan dalam penelitian ini yaitu data iklim tahun 2011 sampai dengan 2020 yang diperoleh dari Badan Meteorologi, Klimatologi, dan Geofisika Kabupaten Sumba Timur. Data produktivitas padi tahun 2011 sampai dengan tahun 2020 yang diperoleh dari data Badan Pusat Statistik, serta data iklim dan produktivitas tanaman padi yang diamati langsung di lahan pertanian Desa Kawangu, Kecamatan Pandawai, Kabupaten Sumba Timur selama masa tanam. Penggunaan air konsumtif dan curah hujan dikaitkan dengan produktivitas menggunakan analisis korelasi Pearman. Hasil analisis menunjukkan nilai korelasi sebesar 0,41 untuk penggunaan air konsumtif, nilai ini masuk ke dalam kategori korelasi cukup. Nilai positif menunjukkan hubungan searah dimana semakin banyak penggunaan air konsumtif maka semakin besar produktivitas padi. Sedangkan untuk curah hujan menunjukkan hasil analisis korelasi Pearman sebesar -0,14 yang masuk kategori korelasi sangat lemah, nilai negatif menunjukkan hubungan yang tidak searah dimana semakin besar nilai curah hujan membuat produktivitas padi berkurang. Nilai penggunaan air konsumtif yang memiliki tingkat korelasi cukup digunakan untuk memprediksi produktivitas menggunakan analisis regresi kemudian dibandingkan dengan data produktivitas padi hasil pengamatan langsung di lapangan.

Kata kunci: Produktivitas, penggunaan air konsumtif, curah hujan, korelasi pearman, iklim

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**THE PRODUCTIVITY OF RICE PLANTS BASED ON CROP
CONSUMPTIVE USE AND RAINFALL IN EAST SUMBA REGENCY,
EAST NUSA TENGGARA PROVINCE**

ABSTRACT

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The productivity of rice plants is closely related to the availability of water, limited water conditions on agricultural land lead to decrease in the value of rice plant productivity. However, it does not mean that abundant water can guarantee an increase in crop productivity. This study aims to find the relationship between crop consumptive use and rainfall on rice productivity in East Sumba Regency. Furthermore, the material used in this study was climate data from 2011 to 2020 which were obtained from the Meteorology, Climatology and Geophysics Agency of East Sumba Regency. Rice productivity data from 2011 to 2020 were obtained from data from the Central Statistics Agency, as well as climate data and rice plant productivity directly observed on agricultural land in Kawangu Village, Pandawai District, East Sumba Regency during the growing season. Crop consumptive use and rainfall on rice productivity were associated with productivity by using Pearman correlation analysis. The results of the analysis show a correlation value of 0.41 for crop consumptive use. This value is considered in the category of sufficient correlation. A positive value indicates a unidirectional relationship in which the more consumptive use of water, the greater the productivity of rice. Meanwhile, for rainfall, the results of the Pearman correlation analysis are -0.14 which is considered in the category of very weak correlation, a negative value indicates a non-unidirectional relationship in which the greater the value of rainfall, the lower the productivity of rice. In addition, the value of consumptive use which had a sufficient correlation level was used to predict productivity by comparing it with consumptive use data which was observed directly on the land and the results were compared with rice productivity data from direct observations in the field.

Key words: Productivity, consumptive use, rainfall, pearman correlation, climate

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