

**PENGARUH KONVERSI LAHAN SAWAH MENJADI
PERKEBUNAN KELAPA SAWIT TERHADAP
KETERSEDIAAN AIR TANAH DI KECAMATAN LUHAK
NAN DUO KABUPATEN PASAMAN BARAT**

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ABSTRAK

Penelitian mengenai pengaruh konversi lahan sawah menjadi perkebunan kelapa sawit terhadap ketersediaan air tanah telah dilaksanakan di Kecamatan Luhak Nan Duo, Kabupaten Pasaman Barat dari bulan April hingga November 2016. Tujuan penelitian adalah untuk mengkaji ketersediaan air tanah akibat konversi lahan sawah menjadi perkebunan kelapa sawit. Pengambilan sampel tanah berdasarkan metode survei secara *purposive random sampling*. Sampel tanah yang digunakan yaitu sampel tanah utuh dan sampel tanah komposit yang diambil pada lahan sawah setelah panen dan perkebunan kelapa sawit yang berumur 7 tahun dan 11 tahun setelah dikonversi. Hasil penelitian menunjukkan bahwa bahan organik tanah pada lahan sawah 9,15%-9,47% dan pada perkebunan kelapa sawit 3,51%-5,76%, berat volume tanah pada lahan sawah 0,82 g/cm³-0,86 g/cm³ dan pada perkebunan kelapa sawit 0,92 g/cm³-1,11 g/cm³, total ruang pori tanah pada lahan sawah 65,27%-66,68% dan pada perkebunan kelapa sawit 56,34%-63,71%, serta permeabilitas tanah pada lahan sawah 5,47 cm/jam-6,23 cm/jam dan pada perkebunan kelapa sawit 4,07 cm/jam-5,07 cm/jam. Pori air tersedia pada lahan sawah 7,92%-8,09% dan pada perkebunan kelapa sawit 11,07%-14,17%, sedangkan kandungan air tanah yang diukur dengan *Gypsum Block* yaitu memiliki nilai yang berfluktuasi.

Kata kunci : *air tersedia, konversi lahan, perkebunan kelapa sawit, sawah*



EFFECT OF PADDY FIELD CONVERSION TO OIL PALM PLANTATION ON SOIL WATER AVAILABILITY IN LUHAK NAN DUO DISTRICT WEST PASAMAN REGENCY

ABSTRACT

A research on the effect of paddy field conversion to oil palm plantation on soil water availability was conducted in Luhak Nan Duo District, West Pasaman Regency from April to November 2016. The purpose of the research was to assess soil water availability affected by paddy field conversion to oil palm plantation. This research used survey method and soil samples were taken based on *purposive random sampling*. Soil samples used were undisturbed and composite samples which were taken at paddy field after harvest and at oil palm plantation after 7 years and 11 years conversion. The results showed that soil organic matter in paddy field was 9.15% - 9.47% and in oil palm plantation was 3.51% - 5.76%, soil bulk density in paddy field was 0.82 g/cm³-0.86 g/cm³ and in oil palm plantation was 0.92 g/cm³ - 1.11 g/cm³, soil total pore in paddy field was 65.27% - 66.68% and in oil palm plantation was 56.34% - 63.71%, as well as the permeability of the soil in paddy field was 5.47 cm - 6.23 cm and in oil palm plantation was 4.07 cm – 5.07 cm. Plant available water in paddy field was 7.92% - 8.09% and in oil palm plantation was 11.07% -14.17%, while the soil water content measured by *Gypsum Block* was fluctuating.

Keywords: *land conversion, paddy field, plant available water, oil palm plantation*

