

ABSTRACT

THE EFFECT OF TREATMENT PATTERN ON THE EFFICIENCY OF SOIL TREATMENT USING A HAND TRACTOR

BY

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It is important to choose a tillage pattern with the aim of achieving efficiency and effectiveness. This study aims to analyze the effect of tillage patterns on processing work capacity, processing time efficiency and fuel requirements. This research was conducted at the BSIP Lampung Natar Experimental Garden located in Negara Ratu Village, Natar District, South Lampung Regency, Lampung Province. The research parameters observed were work capacity, efficiency based on time lost during processing and fuel consumption. The results showed that the tillage pattern did not significantly affect processing work capacity, the working capacity of the edge pattern averaged 0.044 ha/hour, the middle pattern averaged 0.029 ha/hour and the circumferential continuous pattern averaged 0.032 ha/hour. The value of work efficiency based on time lost taking into account the prices which include time lost due to overlapping losses from land preparation work, time lost due to wheel slip, losses for turning at the end and losses for settings, overcoming congestion and minor damage from the highest to the highest the lowest is the continuous circumference pattern with an average of 49.86%, an average middle pattern of 44.87% and an average edge pattern of 40.71%. Tillage pattern has no significant effect on fuel consumption. The fuel consumption for the edge pattern is an average of 0.53 liters/hour, the middle pattern is an average of 0.55 liters/hour and the circular pattern is an average of 0.45 liters/hour.

Keywords: Land processing efficiency, Fuel consumption, Processing patterns, Hand tractors, Time lost.

ABSTRAK

PENGARUH POLA PENGOLAHAN TERHADAP EFISIENSI PENGOLAHAN TANAH MENGGUNAKAN TRAKTOR TANGAN

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Pola pengolahan tanah penting untuk dipilih dengan tujuan mencapai efisiensi dan efektivitas. Penelitian ini bertujuan untuk menganalisis pengaruh pola pengolahan tanah terhadap kapasitas kerja pengolahan, efisiensi waktu pengolahan dan kebutuhan bahan bakar. Penelitian ini dilaksanakan di Kebun Percobaan Natar BSIP Lampung yang berlokasi di desa Negara Ratu Kecamatan Natar Kabupaten Lampung Selatan Provinsi Lampung. Parameter penelitian yang diamati yaitu kapasitas kerja, efisiensi berdasarkan waktu hilang selama pengolahan dan konsumsi bahan bakar. Hasil penelitian menunjukkan bahwa pola pengolahan tanah tidak berpengaruh signifikan terhadap kapasitas kerja pengolahan, nilai kapasitas kerja pola tepi rata-rata 0,044 ha/jam, pola tengah rata-rata 0,029 ha/jam dan pola keliling bersambung rata-rata 0,032 ha/jam. Nilai efisiensi kerja berdasarkan waktu hilang dengan memperhitungkan harga-harga yang meliputi waktu hilang karena kerugian tumpang tindih hasil kerja pengolahan tanah, waktu hilang karena slip roda, kerugian untuk belok diujung dan kerugian untuk pengaturan, mengatasi kemacetan dan kerusakan kecil dari yang paling tinggi sampai dengan terendah adalah pola keliling bersambung rata-rata 49,86 %, pola tengah rata-rata 44,87 % dan pola tepi rata-rata 40,71 %. Pola pengolahan tanah tidak berpengaruh signifikan terhadap konsumsi bahan bakar. Konsumsi bahan bakar pola tepi rata-rata

0,53 liter/jam, pola tengah rata-rata 0,55 liter/jam dan pola keliling bersambung rata-rata 0,45 liter/jam.

Kata kunci: Efisiensi pengolahan lahan, Konsumsi bahan bakar, Pola pengolahan, Traktor tangan, Waktu hilang.