ANALISIS KESESUAIAN DAN KEBUTUHAN *COMBINE HARVESTER* PADA LAHAN SAWAH DI WILAYAH KABUPATEN KULON PROGO DENGAN *LINIER PROGRAMING*

INTISARI

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Penelitian ini bertujuan untuk mengetahui jumlah kebutuhan *combine harvester*, dan merekomendasikan *combine harvester* yang sesuai diterapkan di Kabupaten Kulon Progo. Secara konvensional pemanenan padi di daerah tersebut sudah dilaksanakan secara mekanis yaitu menggunakan *thresher* dan sebagian kecil dengan *combine harvester*. Pada penelitian ini *combine harvester* yang dijadikan rekomendasi hanya digunakan untuk penambahan apabila di suatu wilayah tersebut ternyata perlu masukan *combine harvester*.

Analisis penelitian ini menggunakan metode program linier untuk mengetahui jumlah kebutuhan *combine harvester* dan *combine harvester* yang direkomendasikan. Analisis dengan metode program linier terdapat fungsi kendala, antara lain waktu tersedia efektif pemanenan padi, luas lahan maksimal yang dipanen *combine harvester*, kapasitas kerja *combine harvester*, jumlah *combine harvester* yang sudah ada dan biaya awal penggunaan *combine harvester*.

Hasil penelitian menunjukan bahwa jumlah kebutuhan *combine harvester* yang perlu ditambahkan di Kabupaten Kulon Progo adalah sebanyak 288 unit. *Combine harvester* yang direkomendasi yaitu *combine harvester* dengan kapasitas kerja 0.70 hari/ha, sekiranya diperlukan biaya modal awal Rp. 28.441.152.000.

Kata kunci : Kesesuaian, kebutuhan, *combine harvester*, luas lahan

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THE ANALYSIS OF SUITABILITY AND THE NEEDS OF COMBINE HARVESTER ON FIELDS AREA IN KULON PROGO REGENCY WITH THE LINIER PROGRAMING

ABSTRACT

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The purpose of this research is to discover the number of the need of combine harvester bu sugesting suitable combinme harvester in Kulon Progo regency. The conventional harvesting of paddy have evolved to the mechanical by using thresher and fraction combine harvester. In that area, the combine harvester use for addition if in such a region need combine harvester input.

The aditional method used in this research is linier programing to discover the number of needs of combine harvester and the combine harvestewr that have been sugested. The linear programming method has constrain function such as the effective time of harvesteing, maximum area cultivated by combine harvester, the work capacity of combine harvester, the number of available combine harvester and the early cost of the combine harvester.

Research results show that the number on the needs of combine harvester which needs to be added in Kulon Progo regency are 288 units of combine harvester that had been suggested. The combine harvester that had been suggested is combine harvester with 0,70 day/ha work capacity. With the early cost of the combine harvester Rp. 28.441.152.000.

Keywords : *Suitability, needs, combine harvester, land area*

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