

## INTISARI

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Saat ini, proses budidaya kentang di daerah Wonosobo masih menggunakan proses tradisional atau manual. Proses tersebut memerlukan jumlah buruh tani, waktu kerja dan biaya yang cukup besar. Untuk mengatasi hal tersebut, kelompok tani wilayah Wonosobo yang bernama kelompok “Tani Sejahtera” mendesain mesin tanam kentang yang diharapkan dapat membantu petani kentang dalam mengurangi biaya penanaman kentang. Penelitian ini bertujuan untuk menguji kinerja mesin tanam kentang yang telah dibuat oleh kelompok tani tersebut sesuai dengan standar penanaman kentang wilayah Wonosobo. Selain itu, penelitian ini bertujuan untuk menganalisis kinerja ekonomi mesin tanam kentang yang berguna untuk pengembangan sebuah usaha pelayanan jasa mesin tanam kentang mekanis. Metode yang dilakukan pada penelitian dimulai dengan mengumpulkan data standar penanaman kentang petani Wonosobo. Selanjutnya pengujian mesin tanam kentang di lahan pertanian dengan kemiringan sebesar 0 derajat kemiringan. Hasil percobaan tersebut kemudian dianalisis menghasilkan hasil pengujian kinerja mesin tanam kentang antara lain, kapasitas kerja teoritis sebesar 74 %, kapasitas kerja aktual sebesar 82.5 % dan mutu tanam mesin tanam kentang belum sesuai sehingga perlu dilakukan evaluasi di bagian implement mesin tanam kentang. Selain itu, hasil kinerja ekonomi yang diperoleh antara lain, hasil *Break Even Point* (BEP) sebesar 4.9 ha/tahun dengan lama pengoperasian mesin minimal 3.32 tahun dan hasil *Benefit Cost Ratio* (BCR) sebesar 1.5. Berdasarkan hasil kinerja ekonomi tersebut, mesin tanam kentang layak dikembangkan menjadi sebuah usaha pelayanan jasa mesin tanam kentang mekanis dengan harga sewa sebesar Rp. 1.857.483 per hektar area. Penghematan yang dapat diperoleh petani dari penyewaan layanan jasa mesin tanam kentang sebesar 12 % per hektar area.

Kata kunci: budidaya kentang, mesin tanam kentang, biaya budidaya penanaman kentang

## ABSTRACT

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*Currently, the potato cultivation process in the Wonosobo area still uses traditional or manual processes. This process requires a large number of agricultural laborers, working time, and costs. To overcome this, a farmer group in the Wonosobo area called the "Tani Sejahtera" group designed a potato planting machine that is expected to help potato farmers reduce the costs of planting potatoes. This research aims to test the performance of the potato planting machine that has been made by the farmer group by potato planting standards in the Wonosobo region. In addition, this research aims to analyze the economic performance of potato planting machines which is useful for developing a mechanical potato planting machine service business. The method used in the research began by collecting standard potato planting data from Wonosobo farmers. Next, test the potato planting machine on agricultural land with a slope of 0 degrees. The results of the experiment were then analyzed to produce test results for the performance of the potato planting machine, including theoretical working capacity of 74%, actual working capacity of 82.5% and the planting quality of the potato planting machine was not suitable so it was necessary to evaluate the implement section of the potato planting machine. Apart from that, the economic performance results obtained include Break Even Point (BEP) results of 4.9 ha/year with a minimum machine operating time of 3.32 years and Benefit Cost Ratio (BCR) results of 1.5. Based on the results of this economic performance, the potato planting machine is worthy of being developed into a mechanical potato planting machine service business with a rental price of IDR. 1,857,483 per hectare area. The savings that farmers can obtain from renting potato planting machine services is 12% per hectare of area.*

**Keywords:** *potato cultivation, potato planting machine, potato planting cultivation costs*