

ABSTRAK

**ANALISIS EFESIENSI ANTARA ALAT SEMPROT MANUAL DAN
ALAT SEMPROT ELEKTRIK DI SAWAH DAERAH IRIGASI
MANUMUTI KELURAHAN LASIANA**

Chelvin D*)

Lano M.**)

Jonathan E. **)

Penelitian yang bertujuan mengetahui kinerja alat semprot manual dan elektrik telah dilakukan di DI Manikin Blok D, yang masuk dalam wilayah Kelurahan Lasinana Kota Kupang, pada Bulan Maret 2026. Penelitian ini merupakan penelitian yang menggabungkan metode survey pada 20 responden dan pengujian langsung dilapangan dengan operator terlatih dalam penggunaan alat semprot manual dan alat semprot elektrik. Analaisis ekonomis dilakukan dari data yang diperoleh melalui wawancara responden..Hasil penelitian menunjukkan bahwa kapasitas kapasitas kerja alat penyemprot manual rata-rata sebesar 0,42 ha/jam sedangkan alat semprot ekelktrik 0,69 ha/jam. Waktu yang diburuhkan untuk melakukan pekerjaan 1 ha lahan, alat semprot manual membutuhkan waktu 2,38 jam, sedangkan alat semprot elektrik membutuhkan waktu 1,45 jam. Biaya investasi pembelian alat semprot manual dan alat semprot eleketrik akan mencapai keseimbangan pada penyemprotan 16 ha.

Kata kunci: kapasitas kerja, alat semprot manual, alat semprot elektrik,
Lasiana

Keterangan: *Peniliti
:** Pembimbing

ABSTRACT

EFFICIENCY ANALYSIS OF MANUAL AND ELECTRIC SPRAYERS IN PADDY FIELDS OF THE MANUMUTI IRRIGATION AREA, LASIANA VILLAGE

Chelvin D*)

Lano M.**)

Jonathan E. **)

A study aimed at evaluating the performance of manual and electric sprayers was conducted in March 2026 at the Manikin Block D Irrigation Area, located in Lasinana Urban Village, Kupang City. The research combined a survey of 20 respondents with direct field testing involving operators trained in the use of both manual and electric sprayers. An economic analysis was performed based on data obtained through respondent interviews. The results showed that the average work capacity was 0.42 ha/hour for the manual sprayer and 0.69 ha/hour for the electric sprayer. Regarding the time required to treat one hectare of land, the manual sprayer took 2.38 hours, whereas the electric sprayer took 1.45 hours. The investment costs for purchasing the manual and electric sprayers would reach a break-even point at a spraying coverage of 16 hectares.

Keywords: work capacity, manual sprayer, electric sprayer, Lasiana

Notes:

*) Researcher

***) Supervisor