SISTEM IRIGASI TETES BAWAH PERMUKAAN BERTEKANAN RENDAH UNTUK TANAMAN SELADA (*Lactuca sativa* L.) DI DESA BONTOKAPE, KECAMATAN BOLO, KABUPATEN BIMA

Low Pressure Subsurface Drip Irrigation System for Cultivate Culture Lettuce (Lactuca sativa l.) in Bontokape Village, Bolo District, Bima Regency

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ABSTRAK

Tujuan dari penelitian ini adalah merancang sistem irigasi tetes bawah permukaan, Mengetahui respons tanaman selada (*Lactuca sativa* L.) terhadap sistem penyiraman yang diterapkan. Metode penelitian yang digunakan adalah eksperimental dengan percobaan pada tanah berdebu menggunakan 2 bedengan. Adapun parameter dalam penelitian ini antara lain: Sifat fisik tanah, kebutuhan air tanaman, keseragaman *emitter*, tinggi tanaman, jumlah daun, berat tanaman. Pada penelitian diperoleh tinggi tekan pipa A yaitu 9 cm pipa B yaitu 9.5 cm. tingkat umur tanaman pada waktu panen diperoleh nilai ETc tertinggi yaitu 4,316 mm/hari. Tahap awal nilai ETc sebesar 2.64 mm/hari, Rata-rata nilai EU sebesar 44,28%. Rata-rata tinggi tanaman dari hari ke-4 dan seterusnya mengalami keterlambatan kenaikan. Dikarenakan unsur hara pada tanaman belum tercukupi dan proses pertumbuhannya juga membutuhkan waktu yang cukup lama. berat total selada selama 50 hari sebesar 496,51 gram. Disimpulkan bahwa Rancangan alat sebelum ditimbun mendapatkan Rata-rata nilai EU sebesar 44,28%. Nilai keseragaman pipa penetes tidak baik disebabkan tabung mariotte yang tidak rata Sehingga air yang keluar tidak seragam. Kebutuhan air tanaman dalam sistem irigasi tetes, semakin tinggi produksi basah total akan semakin tinggi pemberian dan hasil penggunaan air.

Kata kunci: kebutuhan air tanaman, selada, tanah

ABSTRACT

The purpose of this study was to design a subsurface drip irrigation system, to determine the response of lettuce (Lactuca sativa L.) to the applied watering system. The research method used was experimental with experiments on dusty soil using 2 beds. The parameters in this study include: Soil physical properties, plant water requirements, emitter uniformity, plant height, number of leaves, plant weight. In this study, the pressure head of pipe A was 9 cm, pipe B was 9.5 cm. the level of plant age at harvest time obtained the highest ETc value of 4.316 mm/day. The initial stage the ETc value was 2.64 mm/day, average EU value was 44,28%. The average plant height from day 4 onwards experienced a delay in increase. Because the nutrients in plants have not been fulfilled and the growth process also requires quite a long time. The total weight of lettuce for 50 days was 496.51 grams. It was concluded

that the design of the tool before being stockpiled received an average EU value of 44,28%. The uniformity value of the dropper pipe is not good due to the unevenness of the Mariotte tube so that the water that comes out is not uniform. The water needs of plants in drip irrigation systems, the higher the total wet production, the higher the supply and yield of water use.

***Keywords**: lettuce, soil, plant water requirements*