

UJI KINERJA EMITER DENGAN BERBAGAI JENIS KAIN PADA IRIGASI TETES BAWAH PERMUKAAN TANAH TERHADAP PERTUMBUHAN TANAMAN CABAI (*Capsicum annum* L.) DI DESA SAMBIK BANGKOL LOMBOK UTARA

*Emitter Performance Test with Various Types of Fabrics on Subsurface Irrigation to Growth of Chilli (*Capsicum annum* L.) plant in Sambik Bangkol Village North Lombok*

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ABSTRACT

This study aims to determine the ability of a porous cloth to escape the water and the range of wet soil in each emitter and determine the response of the growth of chili crops to the provision of subsurface drip irrigation water with various types of cloth namely Celika, Eliza, Peles, and Legacy cloths. This research method uses an experimental method that is conducting experiments and direct observation in the field. The parameters observed were irrigation water demand, head pressure, emission uniformity of emitters, wet range, water decrease in Mariotte tube, soil texture, field capacity, permanent wilting point, moisture content, soil permeability, crop height, number of leaves, and canopy width. The results showed that there was no noticeable difference for each type of cloth, the average growth of chili crop was quite good during the 22 days of the research. The best type of cloth is legacy cloth because the average value for each emitter is 10.8ml and the emitter uniformity value is 94.44%. This value is quite good because this research is carried out on dry land so the use of water must be carried out as efficiently as possible without giving a bad impact on the growth of chili crops. The wet range of the soil is directly proportional to the ability of the emitter to escape the water.

Keywords: *subsurface irrigation, the ability to flow the water, the response of crops, chili crops*

ABSTRAK

Penelitian ini bertujuan untuk mengetahui kemampuan bahan porus kain meloloskan air dan jangkauan basah tanah pada tiap emiter serta mengetahui respon pertumbuhan tanaman Cabai terhadap pemberian air irigasi tetes bawah permukaan dengan berbagai jenis kain yaitu kain Celika, Eliza, Peles, dan Legacy. Metode penelitian ini menggunakan metode eksperimental yaitu melakukan percobaan dan pengamatan langsung di lapangan. Parameter yang diamati adalah data kebutuhan air irigasi, tinggi tekan, keseragaman emiter, jangkauan basah, penurunan air tabung mariotte, tekstur tanah, kapasitas lapang, titik layu permanen, kadar lengas, permeabilitas tanah, tinggi tanaman, jumlah daun, dan lebar tajuk. Hasil penelitian menunjukkan bahwa tidak terlihat perbedaan yang begitu nyata untuk setiap jenis kain, rata-rata pertumbuhan tanaman cabai cukup baik selama 22 hari penelitian yang dilakukan. Untuk jenis kain terbaik ialah kain legacy karena didapatkan nilai rata-rata untuk setiap emiter sebesar 10,8ml serta nilai keseragaman emiternya sebesar 94,44%. Nilai tersebut tergolong cukup baik karena penelitian ini dilakukan pada lahan kering maka penggunaan air harus

dilakukan seefisien mungkin tanpa memberikan dampak buruk terhadap pertumbuhan tanaman cabai. Jangkauan basah tanah berbanding lurus dengan kemampuan bahan emiter meloloskan air.

Kata Kunci: irigasi bawah permukaan, kemampuan meloloskan air, respon tanaman, tanaman Cabai