

Yan Satria Rizky Ardiansyah. 220311100152. Pengaruh Pemberian Pupuk Organik Cair (POC) Urin Sapi Terhadap Pertumbuhan dan Hasil Bawang Merah (*Allium ascalonicum* L.) Pada Tanah Mediteran Bangkalan. Di bawah Bimbingan Erick Yuhardi, S.P., M.P dan Ir. Sinar Suryawati, M.Si

ABSTRAK

Urin sapi merupakan limbah peternakan yang berpotensi mencemari lingkungan, namun berprospek dimanfaatkan sebagai pupuk organik cair (POC). Penelitian ini dilakukan bertujuan untuk mengetahui pengaruh pemberian POC urin sapi dan berapa konsentrasi yang terbaik untuk pertumbuhan dan hasil bawang merah pada tanah mediteran Bangkalan. Penelitian ini dilaksanakan di Lahan Percobaan Agroekoteknologi dan analisis hara POC dilakukan di Laboratorium Ilmu Tanah dan Sumberdaya Lahan Fakultas Pertanian Universitas Trunodjoyo Madura yang dimulai dari bulan Februari 2026 sampai April 2026. Rancangan yang digunakan dalam penelitian ini yaitu Rancangan Acak Lengkap (RAL) terdiri dari 6 taraf perlakuan konsentrasi POC urin sapi yang diaplikasikan 3 kali selama satu periode umur tanaman yakni, P0=(kontrol), P1=(25 mL POC urin sapi/1 L air), P2=(50 mL POC urin sapi/1 L air), P3=(75 mL POC urin sapi/1 L air), P4=(100 mL POC urin sapi/1 L air), P5=(125 mL POC urin sapi/1 L air). Hasil penelitian menunjukkan bahwa POC urin sapi memiliki pH, N-total, P-total, dan K-total telah memenuhi standar persyaratan pupuk organik cair berdasarkan Peraturan Menteri Pertanian No.261/KPTS/SR.310/M/4/ 2019. Pemberian POC urin sapi berpengaruh nyata meningkatkan jumlah daun (49 dan 56 HST) serta bobot daun, tetapi tidak berpengaruh nyata meningkatkan tinggi tanaman, volume akar, jumlah anakan umbi, dan sebagian besar parameter hasil umbi. Pemberian POC urin sapi berpengaruh pada parameter daun dibandingkan parameter lainnya dengan konsentrasi yang terbaik pada perlakuan P5 (125 mL POC urin sapi/1 L air).

Kata kunci: *Bawang merah, Pupuk organik cair, Tanah mediteran, Urin sapi*

Yan Satria Rizky Ardiansyah. 220311100152. The Effect of Liquid Organic Fertilizer (LOF) Derived from Cow Urine on the Growth and Yield of Shallot (*Allium ascalonicum* L.) Cultivated in Mediterranean Soil of Bangkalan. Supervised by Erick Yuhardi, S.P., M.P. and Ir. Sinar Suryawati, M.Si.

ABSTRACT

Cow urine is a livestock waste that has the potential to cause environmental pollution; however, it also has promising potential for utilization as a liquid organic fertilizer (LOF). This study aimed to determine the effect of cow urine LOF application and to identify the optimum concentration for enhancing the growth and yield of shallots cultivated on Mediterranean soil of Bangkalan.. The research was conducted at the Agroecotechnology Experimental Field, while nutrient analysis of the cow urine LOF was carried out at the Soil Science and Land Resources Laboratory, Faculty of Agriculture, Universitas Trunojoyo Madura, from February to April 2026. The experiment employed a Completely Randomized Design (CRD) consisting of six concentration treatments of cow urine LOF applied three times during one growing period: P0 (control), P1 (25 mL cow urine LOF/1 L of water), P2 (50 mL cow urine LOF/1 L of water), P3 (75 mL cow urine LOF/1 L of water), P4 (100 mL cow urine LOF/1 L of water), and P5 (125 mL cow urine LOF/1 L of water). The results showed that the pH, total nitrogen (N), total phosphorus (P), and total potassium (K) contents of the cow urine liquid organic fertilizer (LOF) met the quality standards for liquid organic fertilizer established by the Regulation of the Minister of Agriculture of the Republic of Indonesia No. 261/KPTS/SR.310/M/4/2019. The application of cattle urine LOF significantly increased the number of leaves at 49 and 56 days after planting (DAP) and leaf fresh weight. However, it had no significant effect on plant height, root volume, number of bulb tillers, or most bulb yield parameters. The application of cow urine liquid organic fertilizer (LOF) showed the greatest effect on leaf-related parameters compared to the other observed parameters, with the best concentration observed in treatment P5 (125 mL of cow urine LOF per 1 L of water).

Keywords: *Shallot, Liquid Organic Fertilizer, Mediterranean Soil, Cow Urine.*