

ABSTRAK

PERTUMBUHAN SETEK BATANG SINGKONG (*Manihot esculenta* Crantz) YANG DIRENDAM DALAM BEBERAPA KONSENTRASI ZPT ALAMI BERBAHAN DASAR FERMENTASI URIN SAPI

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Permintaan singkong (*Manihot esculenta* Crantz) yang terus meningkat menuntut adanya upaya peningkatan produksi, salah satunya melalui penggunaan Zat Pengatur Tumbuh (ZPT) alami. Urin sapi merupakan limbah peternakan yang berpotensi sebagai ZPT alami, namun pemanfaatannya saat ini belum optimal. Penelitian ini bertujuan untuk menguji pengaruh perendaman setek batang singkong dalam fermentasi urin sapi terhadap pertumbuhan tanaman singkong. Penelitian dilaksanakan di Desa Sakti Buana, Kecamatan Seputih Banyak, Kabupaten Lampung Tengah, menggunakan Rancangan Acak Kelompok (RAK) non-faktorial dengan tiga kelompok sebagai ulangan. Terdapat 9 taraf perlakuan yang merupakan kombinasi antara konsentrasi fermentasi urin sapi (0%, 25%, 50%, dan 75%) serta lama perendaman (0, 30, dan 60 menit). Homogenitas ragam diuji menggunakan uji Bartlett dan aditivitas data diuji dengan uji Tukey. Data yang homogen dan aditif dianalisis menggunakan Analisis Ragam (ANOVA), lalu dilanjutkan dengan uji Beda Nyata Terkecil (BNT). Hasil penelitian menunjukkan bahwa pemberian fermentasi urin sapi berpengaruh nyata terhadap variabel jumlah akar, namun tidak memberikan pengaruh yang signifikan pada variabel pertumbuhan lainnya. Perlakuan terbaik untuk menghasilkan jumlah akar terbanyak terdapat pada konsentrasi fermentasi urine sapi 50% dengan lama perendaman 30 menit.

Kata Kunci: Fermentasi urin sapi, pertumbuhan tanaman, setek batang, singkong, ZPT alami.

ABSTRACT

GROWTH OF CASSAVA (*Manihot esculenta* Crantz) STEM CUTTINGS SOAKED IN VARIOUS CONCENTRATIONS OF NATURAL PLANT GROWTH REGULATORS DERIVED FROM FERMENTED COW URINE

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The continuously increasing demand for cassava requires efforts to increase production, one of which is through the use of natural Plant Growth Regulators (PGR). Cow urine is livestock waste that has the potential to be a natural PGR, but its utilization is currently not optimal. This study aims to examine the effect of soaking cassava stem cuttings in fermented cow urine on the growth of cassava plants. The research was conducted in Sakti Buana Village, Seputih Banyak Subdistrict, Central Lampung Regency, using a non-factorial Randomized Block Design (RBD) with three blocks as replications. There were 9 treatment levels comprising combinations of fermented cow urine concentrations (0%, 25%, 50%, and 75%) and soaking durations (0, 30, and 60 minutes). Variance homogeneity was tested using Bartlett's test, and data additivity was tested using Tukey's test. Homogeneous and additive data were analyzed using Analysis of Variance (ANOVA), followed by the Least Significant Difference (LSD) test. The results showed that the application of fermented cow urine had a significant effect on the number of roots, but did not have a significant effect on other growth variables. The best treatment to produce the highest number of roots was found at a 50% concentration of fermented cow urine with a 30-minute soaking duration.

Keywords: Cassava, fermented cow urine, natural PGR, plant growth, stem cuttings.