

RINGKASAN

Penelitian ini bertujuan untuk mengetahui pengaruh pupuk organik cair dari urin sapi dan urin kambing terhadap pertumbuhan dan hasil tanaman sawi secara hidroponik. Penelitian telah dilaksanakan sejak bulan juli sampai agustus 2017 di *screen house* Fakultas Pertanian, Universitas Jenderal Soedirman.

Rancangan ini menggunakan Rancangan Acak Kelompok (RAK) faktorial. Faktor pertama yang dicoba adalah pupuk organik cair dari urin sapi (S) yang terdiri dari S0 (urin sapi 0 ppm), S1 (urin sapi 2.500 ppm), S2 (urin sapi 5000 ppm), S3 (urin sapi 7.500 ppm). Faktor kedua adalah pupuk organik cair dari urin kambing (K) yang terdiri dari K0 (urin kambing 0 ppm), K1 (urin kambing 2.000 ppm), K2 (urin kambing 4.000 ppm) dan K3 (urin kambing 6.000 ppm). Jumlah kombinasi perlakuan yaitu 16 perlakuan dengan 3 kali ulangan, menghasilkan 48 unit percobaan.

Variabel yang diamati dalam penelitian yaitu tinggi tanaman, jumlah daun, panjang akar, bobot tanaman segar, bobot akar segar, luas daun. Hasil penelitian menunjukkan bahwa perlakuan pupuk organik cair dari urin sapi dan kambing tidak berpengaruh nyata terhadap laju pertumbuhan tanaman selain tinggi tanaman. Konsentrasi pupuk organik cair dari urin sapi yang berpengaruh nyata terhadap laju pertumbuhan tinggi tanaman dengan konsentrasi 2.500 ppm.

SUMMARY

*The aim of this research is to know the influence of organic fertilizer liquid of urine cow and urine goats on growth and yield of mustard (*Brassica juncea* L.) with hydroponic system. Research has been conducted from July to August 2017 at Screen house of Faculty of Agriculture, University of General Soedirman.*

The design of experiment use is Randomized Block Design (RBD) Factorial with one factor : concentration of organic fertilizer liquid of cow's urine and goat's urine. The first factor cow's urine (s) consisting of : S0 (cow's urine 0 ppm), S1 (cow's urine 2.500 ppm), S2 (cow's urine 5000 ppm), S3 (cow's urine 7.500 ppm). The second factor was the concentration of goat's urine (K) consisting of K0 (0 ppm), K1 (goat's urine 2000 ppm), K2 (goat's urine 4000 ppm), and K3 (goat's urine 2000 ppm). The number of treatment combinations was 16 treatments with 3 replications, yielding 48 experimental units.

The variables observed in this study were plant height, number of leaves, root length, fresh plant weight, fresh root, broad leaves. The result shows that the treatment of cow's urine and goat's urine does not have significantly effect to the growth rate and yield of the plant except plant height. Concentration of organic fertilizer liquid of cow's urine concentration which have significantly on plant height is 2.500 ppm.