

Luh Putu Mahardani Wiparnaningrum, 2012. The Potential Test of Consortium of Cellulolytic Bacteria from Dung beetle as a Bio-Toilet. This study written under the tutthorship of Tri Nurhariyati, S.Si., M.Kes and Drs. Salamun, M.Kes. Biology Departement, Science and Technologi Faculty, Airlangga University, Surabaya.

ABSTRACT

This research was aimed to know determine the influence of consortium of cellulolytic bacteria from the dung beetle as a bio-toilet at a concentration, long time of incubation and combination of both on the cow dung degradation. Experimental design used was a 4x4 factorial design with three replication, which consist of four levels of concentration of consortium of cellulolytic bacteria from the dung beetle (0%, 10%, 20%, 30%) and four levels of incubation time (1, 2,3, and 4 weeks). Variable measured is the value of C-organic by ash method and TSS (Total Suspended Solid) by gravimetric method. The data obtained were analyzed using the test of two way ANOVA and Brown Forsythe at 5% level. Result showed that the concentration of consortium of cellulolytic bacteria from the dung beetle, incubation time, and combination of both has effect on levels of C-organic and TSS values, as well as an increase in the amount of bacterial growth during incubation at a concentration of the consortium compared to bacterial growth during incubation at concentration of the consortium compared to no provision of the concentration of cellulolytic bacteria consortium from dung beetle. The result showed that comparison consortium concentration of the cows feces influential for in decrease of the C-organic levels and didn't influential for the values of TSS. Long time of incubation of degradation process in the cow feces didn't influential for the C-organic levels, but was influential for in decrease the values of TSS. The combination of both factorials didn't influential for in decrease the levels, but was influential for the values of TSS.

Key word : celluloytic bacteria, dung beetle, bio-toilet, cow dung, c-organic, total suspended solid