Application of Rice Husk Biochar and Liquid Organic Fertilizer in Corn Plant Cultivation (Zea mays L.) Supervised by Ir. Damanhuri, M.P.

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ABSTRACT

The use of synthetic fertilizer at high doses and over a long period results in a land degradation. Therefore, the utilization of biochar and liquid organic fertilizer are needed. Purpose of this aplication to examine the effect of rice husk biochar and liquid organic fertilizer on the growth and production of corn crops. The research doing on October 2022 until January 2023 located in Karangrejo village, Sumbersari, Jember. The experiment designed used a randomized block design (RBD) with 2 factors and 3 replication. First factor is rice husk biochar with three doses (0 kg/plots, 2 kg/plots, 3 kg/plots) and second factor is liquid organic fertilizer with four concentrations (0 ml/l, 5 ml/l, 10 ml/l, 15 ml/l). The results showed that rice husk biochar doses of 3 kg/plots had a significant effect on plant height (187,60 *cm*) and stem diameter (22,66 mm). Meanwhile, the application of liquid organic fertilizer of concentration 15 ml/l had a significant effect on plant height (139,67 cm), stem diameter (16,98 mm), fresh cob weight (158,03 g/sample) and (1181,33 g/plots), cob length (13,49 cm), and cob diameter (30,67 mm). This biochar contributed as soil improver and can be bind nutrients to available longer in the soil, while liquid organic fertilizer can increase the availability of nutrients in the root zone. Nevertheless, the application of rice husk biochar and liquid organic fertilizer showed this the parameter corn growth and production no significant effect on all parameter increased.

Keywords : Biochar, Corn, Liquid Organic Fertilizer