

***The Application of Guano Fertilizer with Zigzag Planting Patterns
on Growth and Production of Corn***

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ABSTRACT

Fertilization is one way to provide nutrients needed by corn. Guano is an organic fertilizer that using to feed nutrients on corn. Plants can absorb nutrients optimally if the competition between similar plants is minimum. To minimize this competition, it is necessary to arrange cropping patterns. The aimed of the research was finding the effect of guano doses with zig-zag planting patterns on corn production. Research was conducted in Sempolan, Jember from November 2019 to February 2020. This experiment used randomized block design (RBD) with 2 factors and 4 replications. The first factor was the dose of guano fertilizer consist of three levels, i.e. 0 gram/plant, 250 gram/plant, and 500 gram/plant. While the second factor was two kinds of cropping system, that are conventional and zigzag cropping patterns. The results showed that there was an interaction between dose of guano fertilizer with zigzag cropping patterns at plant height of 52 DAP. The treatment of guano fertilizer had a significant different effect on plants height of 52 DAP and had no significant effect on plant height of 14 DAP, number of leaves, leaf width, stem diameter, weight of wet cobs without corn husk per plot and per sample, weight of dry cobs without corn husk per plot and per sample, and than weight of dry shelled corn per sample and per plot. The treatment of cropping pattern was non-significant difference on all of variabels.

Key Words : *corn, guano fertilizer, and cropping patterns.*