Application of Liquid Organic Fertilizer Made from Banana Stem On Corn Plants With LEISA System (Low External Input for Sustainable Agriculture)

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ABSTRACT

Corn (Zea mays) is one of the major commodities in Indonesia. Intensive use of synthetic fertilizers can lead to soil degradation that reduces the productivity of corn plants. Therefore, environmentally friendly techniques such as liquid organic fertilizer made from banana stems and the application of the LEISA system are needed. This research aims to determine the effect of banana stem liquid organic fertilizer concentration in corn production based on the LEISA system. This research used a non-factorial randomized block design method consisting of five banana stem fertilizer concentration levels with five replications. The concentration levels consist of 100 ml/L, 150 ml/L, 200 ml/L, 250 ml/L, and control (0 ml/L). The results showed that the concentration of banana stem fertilizer significantly responded to fresh cob weight, dry cob weight, and dry kernel weight. Meanwhile, plant height, number of leaves, and cob length did not produce significant differences. It is suspected that the application of liquid organic banana stem fertilizer contributed positively to corn production by improving soil properties related to plant roots and nutrient uptake which affected photosynthetic ability and the supply of assimilates to corn cobs.

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