

ABSTRACT

THE EFFECT OF COMBINATION DOSAGE OF FERMENTED ORGANIC FERTILIZER CHICKEN MANURE AND MYCORRHIZAL BIOFERTILIZER ON THE GROWTH AND PRODUCTION OF SWEET CORN (*Zea mays saccharata* Strut.)

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The use of chicken manure can increase soil fertility without having a negative impact on the environment. The addition of mycorrhizal biofertilizers can optimize the use of chicken manure so that it can encourage increased plant productivity. This research aims to determine the combination dosage of chicken manure and mycorrhizal biofertilizer that has the best effect on the growth and yield of sweet corn (*Zea mays saccharata* Strut.). This research was conducted from April to August 2022 at the experimental garden of the Faculty of Agriculture, Siliwangi University, Tasikmalaya. This research used a Randomized Block Design (RBD) which consisted of 7 treatments combination, namely A (control), B (fermented organic fertilizer chicken manure 5 t/ha), C (fermented organic fertilizer chicken manure 10 t/ha), D (fermented organic fertilizer chicken manure 15 t/ha), E (fermented organic fertilizer chicken manure 5 t/ha + mycorrhizal 10 g/planting hole), F (fermented organic fertilizer chicken manure 10 t/ha + mycorrhizal 10 g/planting hole), and G (fermented organic fertilizer chicken manure 15 t/ha + mycorrhizal 10 g/planting hole). Each treatment was repeated 4 replications. Data were analyzed using variance with the F test and continued with Duncan's Multiple Range Test at a 5% significance level. The results showed that the combination dosage of fermented organic fertilizer chicken manure and mycorrhizal biofertilizer had an effect on the growth and yield of sweet corn. The proportion of fermented organic fertilizer chicken manure 5 t/ha gave a plant height of 42 days after planting, number of leaves 28 and 42 days after planting, weight of cob with cornhusk, weight of cob without cornhusk, yield of cob with cornhusk per plot and conversion to hectares, and yield of cob without cornhusk per plot and conversion to hectare which was higher than without application combination of fermented organic fertilizer chicken manure and mycorrhizal biofertilizer.

Keywords: fermented organic fertilizer, mycorrhizal, sweet corn