

THE EFFECT OF TYPE OF MULCH AND LIQUID ORGANIC MATERIALS ON THE GROWTH AND YIELD OF JAPANESE CUCUMBER (*Cucumis sativus* L. var Ronaldo)

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ABSTRACT

The growth and yield of Japanese cucumber plants using a balanced organic and inorganic farming system is widely applied to obtain maximum production results while maintaining the condition of soil organic matter. This research was conducted to examine the interaction between the type of mulch and liquid organic material, to obtain the best type of mulch and liquid organic material for the growth and yield of Japanese cucumber plants. The research was conducted in the Jejeran 2 fields, Wonokromo, Pleret, Bantul in May-July 2023. The study was a field experiment using a Split Plot Experimental Design. The main plot consists of three levels, namely without mulch, rice straw mulch, and silver black plastic mulch. The sapling plots consist of three levels, namely Biosaka, POC Azolla, and POC TOP G2. The results of the observations were analyzed using a 5% level of variance and further tested with 5% level of DMRT. The treatment of mulch type and liquid organic material had an interaction, namely the combination of rice straw mulch with biosaka on the total fruit weight per experimental plot. The rice straw mulch treatment was the best for the parameters of fruit weight per plant for 1st and 3rd harvest, total fruit weight per plant, fruit weight per experimental plot for 1st harvest, and fruit weight per hectare. Biosaka is the best in terms of total fruit weight per plant and fruit weight per hectare.

Key words: Japanese cucumber, organic liquid, mulch