

**RESPONSE OF APPLICATION TYPES ANIMAL MANURE  
FERTILIZER AND CONCENTRATION LIQUID ORGANIC  
FERTILIZER *Ascophyllum nodosum* ON THE GROWTH AND YIELDS OF  
JAPANESE CUCUMBER (*Cucumis sativus* L. Var. Japanese)**

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**ABSTRACT**

Japanese cucumber is a vegetable commodity that is used as food, medicine, and beauty ingredients. The study aimed to obtain the best type of animal manure fertilizer and the best concentration of liquid organic fertilizer *Ascophyllum nodosum*. The research method used a Complete Randomized Group Design (RAKL) (3 x 3) + 1 with 2 factors and 1 control. The first factor was the type of animal manure including cow, goat, and chicken manure. The second factor was the concentration of liquid organic fertilizer *Ascophyllum nodosum* including 30 ml/liter of water, 50 ml/liter of water, and 70 ml/liter of water. The controls were Urea 2,1 g/plant, TSP 4,2 g/plant, and KCl 2,1 g/plant (basic), as well as Urea 4 g/plant and KCl 4 g/plant (follow-up). Data were analyzed using Analysis of Variance at a 5% level. If there is a significant difference between treatments, continue the Duncan Multiple Range Test at a 5% level. To find out the real difference between treatment combination and control using an Orthogonal Contrast level of 5%. The results of the research showed that the best type of animal manure fertilizer is goat manure. The best concentration of liquid organic fertilizer *Ascophyllum nodosum* is 50 ml/liter of water.

Keywords : Animal Manure Fertilizer, *Ascophyllum nodosum*