

**Effect of Goat Urine Liquid Organic Fertilizer Concentration on  
the Growth of Pepper Seedlings  
(*Piper nigrum* L.)**

Supervised by Rahmawati, SP. MP

Agus Fatah Mustafa  
**Plantation Cultivation Study Program**  
Department of Agricultural Production, Jember State Polytechnic  
e-mail : [agusfatahmustafa@gmail.com](mailto:agusfatahmustafa@gmail.com)

**ABSTRACT**

*Since colonial times it has been known as a producer of spices, one of which is pepper. However, in reality there is a decline in production. Fertilizer is an effort to increase pepper production. One of the fertilizers that comes from livestock waste is goat urine. This research used a non-faktorial Randomized Block Design (RAK) consisting of 6 treatment levels of goat urine liquid organic fertilizer concentration, namely P1 = 0%, P2 = 10%, P3 = 20%, P4 = 30%, P5 = 40%, and P6 = 50% (each level consists of 4 samples of pepper seeds) using 4 repetitions so that there are a total of 96 experimental units. Data from experimental results were analyzed using the Anova variance analysis method at the 5% level. If the results show a significant difference, a further BNT test is carried out at the 5% level. Providing a concentration of liquid organic fertilizer from goat urine had no effect on the growth of pepper seedlings in all observed parameters. Providing liquid organic fertilizer with a concentration of 10% to pepper seedlings showed better results in the parameters of height and stem diameter of pepper seedlings, while at a concentration of 50% the growth of pepper seedlings showed better results in the parameters of number of nodes and number of leaves of pepper seedlings*

**Keywords: Pepper, Liquid Organic Fertilizer, Goat Urine**