

RESPONSE OF GROWTH AND YIELD OF PEANUT PLANTS (*ARACHIS HYPOGAEA* L.) TO THE CONCENTRATION AND TIME INTERVAL OF JUMBAY LEAF LIQUID ORGANIC FERTILIZER

Supervised by Ilham Muhklisin, S.ST., M.Sc

Annesya Frista Pradias

*Study Program of Food Crop Production Technology
Department of Agricultural Production*

ABSTRACT

An innovative way to reduce the overuse of chemical fertilizers in peanut production is to utilize liquid organic fertilizer made from jumbay leaves. However, as both concentration and time intervals can affect growth and production yields, fertilization must be performed with consideration to these two factors. The purpose of this study is to investigate the optimal concentration and timing of jumbay leaf liquid organic fertilizer for peanut plants. The study was conducted in Antirogo Village, Summersari District, Jember Regency, East Java, from October to December of 2023. A randomized block design (RBD) with two factors was employed in this study. The first factor was the liquid fertilizer concentration, which was divided into four levels: K0=0 ml/L, K1=100 ml/L, K2=150 ml/L, and K3=200 ml/L. The time interval was the second factor consisting of three levels, W1 = once per week, W2 = once every two weeks, and W3 = once every three weeks. According to the study, K3W2 had the maximum plant height (33,72 cm), whereas K3W3 had the highest dry biomass weight (35,58 g). K1W2, K2W3, K1W1, and K3W3 produced the greatest results in terms of dry seed weight per sample. Moreover, no interactions were discovered in stem diameter, fresh pod weight, dry pod weight, number of pods, and 100 seed weight. It is apparent that applying liquid organic fertilizer made from jumbay leaves works well as a substitute for lowering chemical fertilizer in peanut plants..

Keywords: *peanuts, lamtoro leaf poc, time interval*