

ABSTRACT

Shallot (*Allium ascalonicum* L.) is a commodity that is commonly used as a cooking spice because it has a distinctive aroma. One of the productivity factors of shallots is low soil fertility. Efforts to increase soil fertility can be done with the NPK Mutiara (16-16-16) and organic guano fertilization. The purpose of this research was to determine the effect of NPK and guano fertilizer on growth and yield of shallot. This research was carried out at the Experimental Garden of Faculty of Agriculture, Malikussaleh University from June to September 2023. The research method used was a 2 factors Randomized Block Design (RBD) with three replications. The NPK factor consisted of three levels, N0= NPK 0 kg/ha (0 g/plant), N1= NPK 200 kg /ha (0,8 g/plant), N2= 400 kg/ha (1,6 g/plant) The guano factor consisted of three levels, G0= guano 0 kg/ha (0 g/plant), G1= guano 6 tons/ha (24 g/plant), G2= guano 12 tons/ha (48 plants). The data obtaine were analyzed using Anova statistical analysis 5% level. If there was a significant difference, further test with *Duncan's Multiple Range Test* (DMRT) at the 5% level was conducted. The results showed that NPK fertilizer treatment could increase plant height, bulb wet weight, bulb dry weight and shallot production tons/ha. The best treatment was NPK at a dose of 400 kg/ha (1,6 g/plant). Guano fertilizer treatment could increase number of tillers, number of bulb, bulb wet weight, bulb dry weight and shallot production tons/ha. The best treatment was guano at a dose of 12 ton/ha (48 g/plant). There was no interaction between NPK dan guano fertlizer treatment on all observed variables.

Keywords: bulbs, dry weight, tillers, wet weight