

**RESPONSES OF GROWTH AND YIELDS OF SHALLOT PLANT
(*Allium ascalonicum* L.) ON APPLICATION OF NATURAL PLANT
GROWTH REGULATORS AND COW BIOURINE CONCENTRATION**

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ABSTRACT

One of the innovations to increase the productivity of shallot is by using natural plant growth regulators such as sprout extract, coconut water, banana hump extract and application of cow biourine. The research aimed to obtain the best combination of natural Plant Growth Regulators (PGR) and cow biourine concentration for growth and yields of shallot. The experiment was conducted in April to June 2019 in Temon Wetan, Temon, Kulon Progo, Special Region of Yogyakarta. The research used a Completely Randomized Block Design, which consisted of two factors plus one control (without PGR and cow biourine). The first factor was the natural plant growth regulator that consisted of 3 levels, which were (Z_1) sprouts extract, (Z_2) banana hump extract, and (Z_3) coconut water. The second factor was cow biourine concentration that consisted of 3 levels, which were concentration (K_1) 30%, (K_2) 40%, and (K_3) 50%. The data analyzed using analysis of variance on a 5% level, the *Contrast Orthogonal* on a 5% level to find out the difference in control with treatment and further tested by the *Duncan's Multiple Range Test* on a 5% level to find out the difference between treatments. The results showed that there were no significant difference between control from treatment combination on the number of bulb per clump, dry bulb weights per sample and hectare. Three types treatment of natural growth regulators gave same result on plant growth at 56 days old and yields. The cow biourine had no significant effects on all parameters except plant height at 14 days old.

Keyword: Shallot, Natural Plant Growth Regulators, Cow Biourine.