EFFECT OF SHALLOT EXTRACT CONCENTRATION ON EARLY GROWTH OF SUGARCANE (*SACCHARUM OFFICINARUM* L.)

Nadya Shinta Zaroh
Plantation Cultivation Study Program
Agricultural Production Department

ABTRACT

Sugarcane (*Saccharum officinarum* L.) is a plantation commodity that has an important role in the economy in Indonesia. The demand for sugar cane increases with the increase in population. This study aims to determine the effect of shallot extract concentration on the early growth of sugar cane using the bud chips method and to determine the best concentration. Bud chips are a potential method of vegetative seeding of sugarcane used to increase sugarcane production. To stimulate and stimulate the formation of roots, shoots and leaves, a Plant Growth Regulator (PGR) is needed, one of which is shallot extract which contains protein (1.5%), carbohydrates (9.2%), β-carotene (50.00 IU), Thiamine or vitamin B1 (30.00 mg), Riboflafin or vitamin B2 (0.04 mg), Niacin (20 mg), Potassium (334.00 mg) and phosphorus (40.00 mg). Shallot extract is a type of vegetable that is commonly consumed, easy to obtain, cheap and not toxic, so it is an alternative to synthetic PGR which is relatively more expensive and has limited availability. The concentration of bean sprout extract used in sugarcane nurseries varied, including N0 (control), N1 20%, N2 40%, N3 60%, N4 80%. The best concentration was found in the N2 treatment (20%) for each parameter including a stem diameter of 2.3 cm; the highest bar is 26.9 cm; the best number of leaves is 7.6 strands; the highest number of puppies, namely 10.40 puppies; the longest root is 54.80 cm; The longest leaf length is 112 cm. While the control treatment (N0) gave unfavorable results.

Keywords: Sugarcane (*Saccharum officinarum* L.), Bud chips, Plant Growth Regulator (PGR), Shallot Extract