

***Response of Sorghum Callus (Sorghum bicolor L.) to In Vitro
Application of the ZPT Kinetin
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ABSTRACT

Sorghum (Sorghum bicolor L.) is a type of cereal that has good growth prospects. However, there was a problem with the development of this sorghum because of the farmers' interest in cultivating it. One way to attract farmers' interest in growing it is by using biotechnological methods like the in vitro culture method. The study was conducted at Jember State Polytechnic from October to December 2023. For this study, a complete non-factorial RAL was used with six levels of Kinetin treatment, namely 0.5 mg/l, 1 mg/l, 1.5 mg/l, 2 mg/l, 2.5 mg/l, and 3 mg/l with observation variables root appearance time, root number, root length, leaf occurrence time, number of leaves, and leaf length. The results of the study showed that ZPT Kinetin treatment gave a real effect on the root count with a ratio of 28.50 roots at a concentration of Kinetin 0.5mg/l as well as gave a very real impact on the roots length at a rate of 6.70 cm at a Kinetin concentration 1mg/l. However, ZPT Kinetin administration treatment did not have a significant effect on variables of root occurrence, time leaves appear, number leaves and length of the leaf.

Keywords: Root number, Root length, ZPT Kinetin