

**Response of Micro Tuber Formation on Red Potato (*Solanum tuberosum* L.)
With Several Concentrations of BAP and Sugar in Vitro**
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ABSTRACT

*Red potatoes (*Solanum tuberosum* L.) are one of the plants whose tubers are used and are widely cultivated and have a high carbohydrate content. In the process of cultivating potatoes, one of the obstacles is the provision of superior seeds in large and fast quantities. The solution to solving this problem is by using propagation through tissue culture techniques by multiplying micro tubers. This research aims to determine the response to the formation of micro tubers in red potato plants using a combination of increasing concentrations of BAP and sugar. This research was conducted at the Jember State Polytechnic Tissue Culture Laboratory in August – November 2023. The research design used factorial RAL with 2 treatments, namely ZPT BAP and sugar. ZPT BAP consists of 3 levels, namely 1.2 mg/l, 1.6 mg/l, and 2 mg/l, while sugar consists of 3 levels, namely 30 g/l, 45 g/l, and 60 g/l. The results obtained were that the interaction 1.2 mg/l BAP + 60 g/l sugar was significantly different to the parameter number of shoots (8 shoots). Apart from the treatment 60 g/l sugar, significant differences were found in the parameters of earliness of micro tubers (8 WAP), number of micro tubers (1 tuber), diameter of micro tubers (0.47 cm), and weight of micro tubers (0.11 g).*

Keywords: red potato, microtubers, BAP, sugar