

Effects of Media and Plant Growth Regulators on Mini-Tuber Yield of Granola Cultivar of Potato in Aeroponics System

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Abstract	<p>Potato is a perennial plant (<i>Solanum tuberosum</i> L.) in the nightshade family, which is one of the most developed and competitive vegetable crops compared to other vegetables. Furthermore, its production could not meet the increasing demand, which led to very intensive research and development programs. This research aims to examine the effect of nutrients and growth regulators on the yield of mini-tuber in the aeroponic system and to determine the best type of nutrient, as well as the type and concentration of plant growth regulators to increase mini-tubers yield in an aeroponics system. This experiment has been carried out experimentally using a split-split plot design. The main plots were the types of nutrient media, which consisted of Grow More-modified nutrient and AB-Mix nutrient. The sub-plots were the types of plant growth regulator (PGR), which consisted of BAP and GA3, while the sub-sub-plot were the concentrations of PGR, which consisted of 0; 5; 10; 15; 20 and 25 μM. Each combination of treatments was repeated three times. The results showed that the use of media type, PGR and PGR concentration affected the formation and yield of Granola cultivar of potato mini-tubers. Knols grown in AB-Mix nutrient medium supplemented with 20 μM GA3 resulted in the best mini-tuber formation, as shown by the average number of mini-tubers of 8.33, the total weight of mini-tubers of 21.38 g and the average mini-tuber diameter of 13.05 mm.</p>
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