The Improvement of Mini Tuber Production of Granola Potato Cultivar in Aeroponics System

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Abstract	Potato is an important food crop in both developed and developing countries and it is the fourth most important food crop after wheat, maize, and rice. Potato production in Indonesia has decreased in recent years, mainly due to the use of low quality tuber seed. The objective of this research was to determine the effect of plant materials, types of nutrients, and planting density on mini tuber formation, as well as to determine the best aeroponics conditions for mini tuber formation of Granola cultivar of potato. This research has been carried out experimentally using a Split-split Plot Design. The main plot was planting materials which consisted of plantlet and knol. The subplot was the type of nutrition media which consisted of Farran nutrition, Otazu nutrition, and AB-commercial mix. The sub-sub-plot was planting density which consisted of 50, 75, and 100 plants/m2. The research results showed that knol planted in aeroponics system on AB-commercial mix at a planting density of 75 plants/m2 resulted in the best mini-tuber production. In this study, for the first time three important factors for potato mini-tuber production have thoroughly been investigated in Indonesia. This finding will be used by Kledung Horticultural Seed Garden, Temanggung, for mass production of high-quality mini-tuber seed, which in turn will provide sufficient tuber seed for the farmer in its surrounding areas. By increasing the production of high-quality tuber seed, it is expected that it will contribute to the improvement of potato productivity and increase Indonesian potato production.
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