

# DEVELOPMENT OF A SUITABLE ACCLIMATIZATION LIQUID MEDIUM AND EVALUATION OF *IN-VITRO* GROWN PLANTS OF THREE POTATO VARIETIES IN HYDROPONIC SYSTEM

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Potato (*Solanum tuberosum* L.) is an important food crop mainly grown in the up country of Sri Lanka. Scarcity of quality seed potato is a major constraint to increase potato production. Present commercial seed potato production methods take longer time as it requires more labourers, space and other infrastructure facilities. Development of a low cost quick method for seed potato production is imperative. This experiment was conducted to develop a suitable acclimatization medium for *in-vitro* grown potato plants of three varieties and to evaluate their growth in a hydroponic system. The experiment was conducted at Agriculture Research and Development Centre, Sita Eliya. Experimental design was two factor factorial, completely randomized design with four replicates. Factor one was three different varieties of potato (Red la soda, Granola and Arnova). Factor two was four liquid media (Albert's solution-1000 EC, Albert's solution-1500 EC, 1/2 MS and MS). Shoot height, root length weight of mini tubers, length of the main stolon, number of stolons and number of mini tubers were recorded. Results revealed that there was a significant interaction between the variety and acclimatization medium for the number of stolons and length of the main stolon, while the other parameters did not show any significant interaction between the variety and acclimatization media. There was a significant varietal difference and effect of media for the number of mini-tubers. Significantly higher mini-tuber yield resulted in plants acclimatized with 1000 EC and 1500 EC Albert's media. Variety Arnova indicated the best performance in most of the parameters. Overall results indicated that there is no any significant difference among media on the acclimatization of *in-vitro* plants.

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