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PRODUCTION OF POTATO MINITUBERS USING SAND HYDROPONICS IN KENYA

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Potato (*Solanum tuberosum* L.) is one of the most important food crop in Kenya. However, the yield have been fluctuating over the years at about 6-7 t/ha as compared to more than 45 t/ha in Europe. Availability of seed potato is one of the major constrain in potato production. In order to improve the situation, an economically feasible technique is required to feed the system of commercial seed production with healthy material at a rate that is in accordance with the existing rate of seed degeneration. In this respect, hydroponics technology was recently introduced as an efficient method to produce and propagate minituber, which are healthy seeds without any contamination to pathogens. A study was therefore conducted at Kenya Agricultural Research Institute (KARI), Tigoni hydroponic unit. 7 different genotypes were evaluated the experiment was laid in randomized complete block design with three replication. Comparison of genotypes was performed using Fischer's protected Least Significant Difference (LSD) mean separation procedure at $P<0.05$. The results indicated that there was significant difference ($P<0.05$) on number and the weight of minitubers of the different genotypes used. However, there was poor performance in all the potato genotypes used. The results showed the highest mean tuber number were obtained from clone 381381.13 (16.11 tubers/plant). Whereas clone 390478.9 had the highest mean weight of 77.2 gms per tuber. However, the experiment needs to be repeated two more season to come up with conclusive recommendations.