DETERMINATION OF OPTIMAL IN VITRO REGENERATION CONDITION OF SWEET POTATO (IPOMOEABATATASL)

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The greatinterest in sweet potato in theword including inGeorgia is associated do to their high content of vitamins, sugar, mineral and antioxidant. Infection diseasescausea highly decrease in its yield. Production of virus free sweet potato is a guarantee to improve the crop productivity for further increasing yield.

In the present study,different invitro combination of temperature (23-25^{0}C ;), light intensity (3000-3500; 5000-5500 lux),photoperiod (18h; 19h) and humidity (65%; 80%) were used for optimization the in vitro development of sweet potato variety“Jewelry”. Apical meristem method was used for in vitro propagation of sweet potato. In vitro propagation of “Jewelry” was observed on Murashige and Skoog(MS) solid mediumwith 0.7% (w/v) agar, 3%(w/v) sucrose adjusted to pH -5.8. Sweet potato in vitro regeneration (high, number of nodes, rooting) were evaluated after 15 days.

The results indicated that the better response for in vitro growth-development of sweet potato variety Jewelry” was obtained under regulated in vitro condition: temperature-28-30^{0}C; 5000-5500 lux; 19h photoperiod and 65% humidity. The obtained in vitro plants showed a strong stem with 5-6 nodes and successful rooting which has a significant influence for their further production in open filed.

Keywords - Sweet Potato, In Vitro, MS Medium, Regeneration.