Plantlet Formation and Acclimatization of Sugarcane cv. PS 881 with Different Types and Concentration of Auxin

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Abstract	This research has been carried out with a view to induce rooting andÃƒÂ,Ã‚Â plantlet formation, followed by acclimatization.ÃƒÂ,Ã‚Â Micro shoots of sugarcane cv. PS 881 were cultured on Murashige and Skoog medium supplemented with different types and concentration of auxins for root induction. This research conducted experimentally using a split-plot design. The main plots were three types of auxins, which consisted of IAA, IBA, and NAA. The subplots were auxin concentrations with four levels, i.e. 0 ÃƒÂŽÃ‚Â¼M, 5 ÃƒÂŽÃ‚Â¼M, 10 ÃƒÂŽÃ‚Â¼M, and 15 ÃƒÂŽÃ‚Â¼M. Significantly faster root emergence time and higher number of roots observed in the Murashige and Skoog basal medium supplemented with 10 ÃƒÂŽÃ‚Â¼M NAA. The best root length obtained in the Murashige and Skoog basal medium supplemented with NAA 0 ÃƒÂŽÃ‚Â¼M. Plantlets derived from NAA 10 ÃƒÂŽÃ‚Â¼M treatment showed the best performance during acclimation with a 100% survival rate. NAA at a concentration of 10 ÃƒÂ,Ã‚Â µM considered to be the best treatment inÃƒÂ,Ã‚Â plantlet formation and acclimatization of sugarcane cv. PS 881. This study showed that the use of MS medium with 10 uM NAA is able to increase the growth of PS 881 sugarcane plantlets. The results of this study can increase the availability of high quality seedlings and increase national sugar production.
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