IN VITRO SHOOT MULTIPLICATION OF PASSION FRUIT (*Passiflora edulis*) USING SHOOT TIPS

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ABSTRACT

In vitro shoot multiplication of passion fruit (*Passiflora Edulis*), using shoot tips is crucial for the large-scale production of disease-free planting material. This research focuses on optimizing the shoot multiplication process using shoot tip explants and different combinations of plant growth regulators. Six treatments involving 3 different concentrations of 6-Benzylaminopurine (BAP) in combination with Indole-3-butyric acid (IBA) and Naphtalene acetic acid (NAA) were tested to evaluate their effects on shoot multiplication and root induction. Despite variations in the concentration of growth regulators, the results showed no significant difference in the overall performance of the treatments. Shoot proliferation was successfully achieved under all conditions, suggesting that BAP, IBA, and NAA can be effectively used for micropropagation of passion fruit. These findings provide a reliable in vitro shoot multiplication method of passion fruit through shoot tip culture, contributing to sustainable cultivation practices and ensuring the production of high-quality planting material.

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