Name(s)	Project Number
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Project Title

Creating a Protocol for the Micropropagation of Plumcot

Abstract

Objectives/Goals
The goal of this experiment was to create a protocol for the micropropagation of plumcot. It addition, it was to find the most effective dose of the growth hormone IBA in the rooting media in order to optimize roots per shoot and established plants of plumcots.

Methods/Materials
Dormant five inch plumcot sticks are excised and sterilized by immersing them into ethanol. All steps from here on are done under the laminar flow hood using aseptic conditions. It is then placed into the sterile 10% sucrose solution. When buds push they are put onto the rooting medium. The pH is adjusted and when they have multiplied individual shoot tips are subcultured singly onto rooting MS medium containing 0.25, 0.5, 0.5 IBA for one week, or no mg/l IBA, no BA, 3% sucrose, standard vitamins and micronutrients, and 7.2 g/l agar and put into capped test tubes. Once roots are well formed the plantlets are transplanted into soilless media and are acclimated in a greenhouse.

Results
The plumcot was most efficiently propagated when 0.5 g/ml IBA was used. For the accession E2.031 the .25 g/ml IBA had an average of 0.7 roots per shoot, .5 IBA had an average of 1.5, and .5 IBA for one week had an average of 0.8 roots per shoot. The control had an average of 0.3 roots per shoot. For the accession E2.067 the .25 g/ml IBA had an average of 0.6 roots per shoot, .5 IBA had an average of 1.35, and .5 IBA for one week had an average of 1 root per shoot. The control had an average of 0.1 roots per shoot.

Conclusions/Discussion
Since the largest dose of IBA (.5 IBA for the full two weeks) yielded the greatest number of roots per shoot and established the most plantlets, it remains unknown whether higher concentrations of IBA would be necessary to identify the optimum protocol for the micropropagation of plumcot, but it can be concluded that the protocol that I used is both effective and efficient.

Summary Statement

The purpose of my project is to create an effective, efficient way to micropropagate plumcot.

Help Received