

Factors affecting on *in vitro* establishment of *Olea europaea* L. cv Barnea

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Abstract—Olea europaea L. (Olive) is a Mediterranean plant whose oil extract has many applications and is a part of cuisines all across the globe. Over the years, Olive plant materials are being introduced in non-native countries as they have now become aware of its high value in the market. In vitro propagation is an effective technique to obtain large quantity of good quality planting materials. However, it is a daunting task to carry out in vitro propagation of this tree species as the establishment of cultures is very hard to obtain due to their recalcitrant nature and region specific as they are native to Mediterranean region. Additionally, olive cultures have been found to be very prone to contamination, especially fungal contamination. In this study, we have emphasized on explant selection, germination rate, contamination rate, effect of sterilants, different media etc effecting on of in vitro cultures establishment of O. europaea L. Artificial media comprising of combination of MS and Rugini Olive media gave best result where young axillary nodes gave the maximum bud break followed by mature axillary nodes and shoot tip.

Keywords: *Olea europaea L., In-vitro, Sterilization, Explant, Media, Establishment.*