Determination of the most suitable culture medium and growth condition for micropropagation of GF677 rootstocks (Hybrid of almond × peach)

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GF 677 *(Prunus persica × Prunus amygdalus)* is one one of the most suitable rootstock for almond and peach. This hybrid produce strong roots and has a good potential for pest and disease resistace also well adapted to unfavourable soil conditions. The aim of this research was to facilitate propagation of this hybrid via tissue culture technique. The time for collecting shoot tips (apical and lateral buds) was autumn to sring, although plant material collected in first days of April showed best result. The best result was achieved when explants were sterilized, using Hgcl2 (0.1%) for 6 minutes. The culture media containing Murashige, Skoog (MS), 1/2MS and modified knop (with differences in macroelements) were used in primary experiments showed that modified knop medium containing 2% sucrose and 0.75% agar caused better result. In this medium, 0.1mg/l BA was used for shoot elongation. Under growth chamber condition, light intensity was maintained at 2500-3000 lux with 8 hours dark period. Room temperature and relative humidity (RH) were held at 24-25^{0c} and 45% respectively. Explants were transferred to proliferation medium after 5 weeks and subcultured every 20 days. Modified knop was used in the proliferation stage too. The results showed that the best proliferation with the mean of 4.30 ($P>0.0001$) was obtained in the absence of NAA (0.0) and with .1 mg/l of BA. In rooting stage, different culture media were used and their effects on rooting were examined. The results showed that LS medium containing 0.3 mg/l NAA and 1.6 mg/l thiamin under 7 days darkness period gave the best result of rooting up to 80%. Propagated plants via tissue culture were transfered to the soil consisting of 40% peat and 60% sand mixture, or giffy 7 blocks. Giffy 7 showed better result than the mixture of peat and sand.