

Response of Peach (*Prunus persica*) Explants to Different Culture Media on the Proliferation StageReza Zarghami¹, Fatima Javid¹¹Agricultural Biotechnology Research Institute of Iran (ABRII), Karaj, Iran

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Peach (*Prunus persica*) belongs to the *Prunoideae*, a subfamily of *Rosaceae* which includes several species. In 2010, the worldwide annual production of *Prunoideae* exceeded 28.3 million tons, showing the important economic role of this family. Proliferation of different plants is demanded for micropropagation and associated *in vitro* studies. Optimizing and maximizing shoot proliferation by focusing on components that used in the culture medium and type of medium is a basic objective of micropropagation studies. *In vitro* proliferation improvement of peach using MS and WPM was previously reported (Balla & Mansvelt, 2013). This experiment, aimed to evaluate the effect of 2 different types of basal media (DKW and MS) in three different forms of multiplication media (solid, liquid and semisolid) on proliferation of peach. This research was carried out in Agricultural Biotechnology Research Institute of Iran (ABRII) in 2013. The experiments were carried out in factorial randomized block design as per the treatment/combination. Four replications in which each there were 4 explants. Hormones including BAP: 3 mg/l, IBA: 0.07 mg/l and GA3: 0.3 mg/l were used equally in each culture media, then after 3 weeks the number of the whole leaves and shoots were recorded and analysed with SAS software. The mean values were compared through Duncan's Multiple Range test at 5% level. The analysis of variance indicated that DKW and MS basal medium had a significant influence on shoots and leaves. The interaction between DKW and MS basal medium was also significant for number of shoots and leaves. Results of Mean Comparison for the two media (DKW and MS) showed the number of shoots and leaves were higher in DKW medium than in MS medium so that in DKW (4.3 shoots and 14.7 leaves) was obtained. Mean Comparison of different basal media showed the highest number of shoots (3.5 pcs) in semisolid medium, while the highest number of leaves was 14.5. The interaction study of the treated application of DKW medium in semisolid form showed the highest number of shoots (5), while the DKW medium in liquid form had produced 18.75 leaves at most. Finally we concluded that the use of DKW medium with semisolid form is more suitable for Peach proliferation.

Keywords: Peach, micropropagation, different Basal medium

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