



Titre :

In vitro embryo germination and proliferation of pistachio (*Pistacia vera* L.)

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Résumé :

In vitro development of isolated embryos and axillary bud proliferation were studied in *Pistacia vera* L. Different regulator-free nutrient media were compared to determine the effects of the mineral solution, agar and sucrose concentrations on seedling development from mature embryos. Nutrient-rich MS [Murashige, T., Skoog, F., 1962. A revised medium for rapid growth and bioassays with tobacco tissue cultures. *Physiol. Plant.* 15, 473-479] and DKW/Driver, J.A., Kuniyuki, A.M., 1984. In vitro propagation of Paradox walnut rootstock. *HortScience* 19, 507-509] mineral solutions were more efficient for the development of aerial parts than nutrient-poor KN [Knop, W., 1884. *Bereitung einer concentrirten nahrungslösung für pflanzen.* *Landwirtsch. Jahrb.* 30, 292-294] and WT [Witth, P.R., 1936. *Plant tissue cultures.* *Bot. Rev.* 2, 419-437] solutions. Reducing the agar concentration enhanced fresh matter production and balanced seedling development. When tested at different concentrations, sucrose was found to orient mature embryo development, with the best results obtained at concentrations of 2-4%. whereas high concentrations (6 and 12%) mainly inhibited elongation of the aerial parts. Plantlets obtained previously from in vitro cultured embryos were propagated by axillary budding. High bud proliferation (six shoots per explant) was achieved when using 17.8 μ M benzyladenine (BA) combined with 0.5 μ M indole-3-butyric acid (IBA). The addition of 2.9 μ M gibberellic acid (GA3) to the propagation medium did not improve axillary shoot yields and on average, media with GA3 produced 2.3-2.6 elongated stems per cultured explant. Shoots were rooted in vitro in half-strength MS medium containing 12.3 μ M IBA.

Mots Clés :

*Isolated zygotic embryo Germination Proliferation Micropropagation Culture medium
Pistacia vera L*

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