

# Turkish Journal of Botany

Turkish Journal

of

Botany

The Effects of Different Sucrose, Agar and pH Levels on In Vitro Shoot Production of Almond  
( *Amygdalus communis* L.)

Songül GÜREL

Sugar Institute, Plant Breeding Department, Etimesgut, 06790 Ankara-TURKEY

Yücel GÜLŞEN

Ankara University, Faculty of Agriculture, Department of Horticulture, Dışkapı, 06110 Ankara-TURKEY

 [Keywords](#)  
[Authors](#)



[bot@tubitak.gov.tr](mailto:bot@tubitak.gov.tr)

[Scientific Journals Home](#)  
[Page](#)

**Abstract:** In this study the possibilities of in vitro vegetative propagation of almond ( *Amygdalus communis* L.) cv. Texas and cv. Nonpareil by shoot-tip culture were investigated. Different levels of sucrose, agar and pH were tested and shoot proliferation, shoot development and growth were observed during three successive stages, namely initiation, transplantation and multiplication. During the initiation stage, proliferation was achieved only with 5 and 6% sucrose and the best explant development occurred with 0.5% agar and pH 5.5. During the second stage, again 5 and 6% sucrose and pH 5.5 gave the best results with respect to shoot production and growth. Although the medium with low agar concentrations (0.5%) was favourable for shoot formation and growth, 0.7% agar was determined to be the most appropriate level for this stage since low agar levels (0.5 and 0.6%) caused vitrification. During the multiplication stage, the highest rate of shoot production was achieved with 3 and 4% sucrose, 0.7% agar and pH 5.5, and higher sucrose and agar levels increased callus formation at the base of the shoots.

**Key Words:** Almond, tissue culture, micropropagation, shoot-tip culture

---

Turk. J. Bot., **22**, (1998), 363-374.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Bot., vol.22,iss.6.](#)