



Turkish Journal of Agriculture and Forestry

Turkish Journal

of

Agriculture and Forestry

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



agric@tubitak.gov.tr

[Scientific Journals Home Page](#)

Indirect Organogenesis in Summer Squash (*Cucurbita pepo* L.)

Shakti Prosad Pal¹, Iftexhar Alam¹, M. Anisuzzaman, Kanak Kanti Sarker,
Shamima Akhtar Sharmin, Mohammad Firoz Alam
Plant Biotechnology Laboratory, Department of Botany, Rajshahi University, Rajshahi-
6205 - BANGLADESH

Abstract: Efficient plant regeneration via organogenesis was established for 2 summer squash (*Cucurbita pepo* L.) cultivars, viz. Bulum and Rumbo, using hypocotyl and cotyledon derived calli. Seeds were surface sterilized in 0.1% HgCl₂ for 5 min, and germinated in vitro in plant growth regulator free MS media. The maximum morphogenic callus induction rate (86%) was observed from a hypocotyl explant by culturing in MS medium supplemented with 2.5 mg l⁻¹ 2,4-D. Calli size and fresh weight increased substantially through subculturing. The highest percentage of shoot regeneration (85%) and highest mean number of shoots (6.89) per culture were obtained with 0.5 mg l⁻¹ thidiazuron. Initiation of multiple shoots through organogenesis from the calli was histologically proven. Hypocotyl explants were more responsive than cotyledon explants in terms of callus induction and subsequent plant regeneration. Regenerated shoots were rooted in MS medium supplemented with 1.0 mg l⁻¹ IBA. About 70% of regenerated plantlets survived and showed new branch development under ex vitro conditions.

Key Words: *Cucurbita pepo*, in vitro, organogenesis, summer squash, thidiazuron

Turk. J. Agric. For., **31**, (2007), 63-70.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Agric. For., vol.31, iss.1.](#)