A complete protocol is presented for in vitro regeneration of pomegranate (Punica granatum L.) cv. ‘Youssef Khany’ a tropical fruit tree, using cotyledonary nodes derived from axenic seedlings. Shoot development was induced from cotyledonary nodes on Murashige and Skoog (1962) (MS) medium supplemented with 2.3-23.0µM benzyladenine (BAP) or kinetin (Kin). Both type and concentration of cytokinin significantly influenced shoot proliferation. The maximum number of shoots (9.8 shoots/explant) was developed on a medium containing 9.0 µM BA. Shoot culture was established by repeatedly sub culturing the original cotyledonary node on a fresh batch of the same medium after each harvest of the newly formed shoots. In vitro raised shoots were cut into nodal segments and cultured on a fresh medium for further multiplication. Thus, from a single cotyledonary node about 30-35 shoots were obtained in 60 days. Shoots formed in vitro were rooted on half-strength MS supplemented with 0.054-5.4 µM naphthaleneacetic acid (NAA). However, a medium containing 0.54 µM NAA resulted in the highest per cent rooting of shoots and significantly higher number of roots than other concentrations. Plantlets were successfully acclimated and established in soil.

Key words: Cotyledonary node, regeneration, Punica granatum.