

Developing a mass propagation technique for *Aralia elata* via somatic embryogenesis

Moon HK, Lee JS and Kim TS

Biotechnology Div., Korea Forest Research Institute, Suwon, Omokdong 43-1, Kyonggido 441-350, Republic of Korea

Abstract

Aralia elata is found in mountain areas all over Korean peninsula. *Aralia elata* is the scientific name for Japanese angelica tree. The tree belongs to the family Araliaceae, commonly known as ginseng family. Bud sprouts from apical shoot tip of the plants are rich in flavor and thus mainly used for both folk medicine and vegetable. The stalks with apical buds are gathered in the early spring and planted in sandy soil or water in the greenhouse. The sprouting buds are then collected and sold as fresh vegetable. Although the plants have been used for food, they have been cultivated in a very small scale. In spring, local farmers just go around mountain areas to search the trees and gather the stalks as much as they get and sell them to the market. No conservation efforts have been made to stop the exploitation or to save the dwindling population. We tried to provide local farmers with the plants that may be used as an alternative to stalks from wild populations. This will help

to conserve the wild populations. However, it is hard to propagate them either by conventional cuttings or by seed germination in a short period of time. Mass propagation using tissue culture systems have shown a great promise with several woody plants. Recently we developed a mass propagation technique via somatic embryogenesis system using mature and/or juvenile explants for *Aralia elata*. Several factors affecting somatic embryogenesis system including SE(somatic

embryo) induction, embryogenic callus proliferation, SE germination, plant regeneration and transplanting to field will be presented. And some problems arising for the somatic embryogenesis system will be also discussed.