

Title *In- vitro* propagation of *Alstroemeria* plant by tTCL and ITCL techniques

Author M. Arshad, E. Chamani and Y. Pourbeyrami

Citation Book of Abstracts. International Conference on Quality Management in Supply Chains of Ornamentals. 21-24 February, 2012. Golden Tulip Sovereign Hotel, Bangkok, Thailand.

Keywords Alstroemeria; ITCL technique; propagation

Abstract

Two different experiments were done to study the regeneration of rhizome and shoot in *Alstroemeria aurantifolia* 'Konyambe' flower by tTCL and ITCL techniques under in vitro condition in biotechnology laboratory of Mohaghegh Ardabili University in Iran. Experiments were arranged in completely randomized designs with five replications. The results of experiments showed that this cultivar of *Alstroemeria* was not competent to produce somatic embryogenesis by tTCL and ITCL. The results also showed rhizome of *Alstroemeria* gave the most and highest *in-vitro* regeneration compared to other organs. No regeneration was found in stem explants which micro-propagated by tTCL and ITCL techniques. Among all evaluated traits, significant difference ($P < 0.05$) was found only in rhizome number which L2D1 treatment was produced the highest rhizome number (mean=3 numbers) compared to other treatments. The results of NAA and BA effects on *in-vitro* regeneration of *Alstroemeria* flowers revealed that 1ppm NAA in combination with 1ppm BA produced the highest and significant rhizome number (mean= 6.16 numbers) compared to other treatments. However, no significant were found in other traits. Comparison of means revealed that the highest root number (2.09) was related to 1 ppm NAA in combination with 1 ppm BA. The highest root length (1.38 cm) was obtained from media which contained 0.1 ppm NAA in combination with 2 ppm BA.