Research News

IN-VITRO PROPAGATION OF STATICE (*LIMONIUM SINUATUM*)

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Statice (*Limonium sinuatum*) is commonly known by Limonim, English statice, German statice, Latifolium and sea lavender which belongs to the family Plumbaginaceae. It is an introduced flowering plant originated from Mediterranean where the dried flowers are popular as filler for floral arrangements. Statice flowers come in white, lavender, yellow, purple and pink colours. Statice is mainly cultivated in the up country wet zone of Sri Lanka. Growers use imported seeds and the statice seeds generally have low germination rate. Therefore, tissue culture technique is the most applicable method for large scale production, as tissue cultured plants show great uniformity, tall stems and wide range of colours, long spikes and high production per plant. Present study was undertaken to develop a suitable micro propagation method for statice at Agricultural Research and Development Centre, Sita Eliya, Nuwara Eliya during 2013 to 2014. Four different cultivars of statice as Yellow, Purple, Indigo, and Blue were selected for the experiment. Nodal cuttings and immature inflorescences cutting were used as explants. Explants were established in MS supplemented with three different hormone combination levels as 1, 2, 3 mg/l BAP and 0.1, 0.2, 0.3 mg/l NAA. After culture establishment, regenerated shoots were transferred to three different multiplication media, where two media including MS, 3 mg/l BAP, with 0.2 mg/l NAA and 0.2 mg/l IAA and the other medium with MS, 3 mg/l BAP, 0.2mg/l GA_3. After 4 weeks, well developed shoots were transferred to the two different root initiation media (MS + hormone free with Activated charcoal and MS+ 1 mg/l IBA with charcoal). After 4 weeks rooted plants were transferred to the acclimatization procedure. Then plants were established in sand : coir dust (1:2) medium. Results revealed that highest culture establishment and shoot regeneration with nodal cutting cultured on MS+ 1 BAPmg/l, 0.1 mg/l NAA than other two media. Highest number of shoots was produced in MS+ 3 mg/l BAP, 0.2 mg/l NAA than the other two media. Maximum number of roots and root length were observed in MS+ 1 mg/l IBA with charcoal medium than other tested medium. Completely developed potted plant with flowers could be produced within 45 days. This technique is most applicable method for large scale true to type planting material production of statice.