

园艺园林科学

柳兰组织培养和快速繁殖体系优化研究

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摘要: 柳兰花色鲜艳,花序大,花期长,抗逆性强,是优良的园林绿化美化植物,然而目前仍野生于山林之中,引种驯化常对野生资源造成破坏,离体培养可以在短时间内获得大量整齐一致的无菌苗,为引种驯化和园林应用奠定基础。本文以柳兰种子为初始材料建立了柳兰离体培养体系,研究了不同附加物对柳兰褐化的影响,通过比较不同培养基对柳兰生长的影响,筛选获得了适宜柳兰生根、壮苗和增殖培养的最佳培养基。研究结果如下:用20% NaClO 对柳兰种子灭菌1.5min可有效抑菌;活性炭和长时间继代培养可有效缓解柳兰褐化现象;适宜柳兰生根、壮苗的培养基是1/2MS+AC 2g/L,适宜柳兰增殖培养的培养基是1/2MS+6-BA 0.5+NAA 0.05。试验结果为柳兰快速繁殖和规模化生产提供依据。

关键词: 柳兰, 褐化, 生根, 增殖

Research on optimization system on tissue culture and rapid propagation of Geranium pratense L.

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Abstract: The colour of Geranium pretense's flower is fresh,also its inflorescence and flowering time are longer.Owing its higher stress tolerance, Geranium pretense is excellent Garden plant.But it is growing in wildness such as forest now . Introduction and domestication of it frequently destroy wild resource of Geranium pretense. Isolated culture can produce evenly sterility seedlings in short time,it is base for introduction and domestication or application in gardens.This paper established Geranium pretense's culture in vitro used seedlings of Geranium pretense. The effect of different accretion on browning of Geranium pretense was studied and the optimal medium composition for rooting and proliferation of Geranium pretense were selected by comparison the effect of different medium culture on growing of Geranium pretense. These results showed that, the seeds of Geranium pratense were sterilized by 20% NaClO for 1.5 min was efficiency;Browning was alleviated by active carbon and longer timing culture in vitro;The optimal medium composition for rooting was 1/2MS+AC 2g/L and 1/2MS+ 6-BA0.5+NAA0.05 was suit for proliferation of Geranium pretense.These results will providing theoretica base for rapid propagation .

Keywords: Geranium pretense, browning, rooting, proliferation

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