

园艺—应用研究

三种草坪草的耐盐性差异及其叶片的显微结构的研究

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摘要:

摘要: 为了解羊茅属高羊茅 (Festuca arundinacea L.)、早熟禾属草地早熟禾 (Poa pratensis L.)、黑麦草属多年生黑麦草 (Lolium Perenne L.) 的耐盐性, 以高羊茅 (凌志、爱瑞三号、阳光宝贝)、草地早熟禾 (纳苏, 枪手股, 优异)、多年生黑麦草 (首相、焦点) 共八个品种为材料, 在不同浓度的NaCl水培营养液中对各种材料幼苗进行耐盐处理。实验表明: 草地早熟禾的耐盐临界浓度为200 mmol/L, 高羊茅和多年生黑麦草的耐盐临界浓度为150 mmol/L; 并确定8个品种的耐盐性的差异: 枪手股最好, 首相最差。同时, 对其相关叶片显微结构: 泡状细胞、维管束、表皮细胞、气孔器进行了分析, 结果表明: 草地早熟禾由于具有与耐盐植物相近的结构而更能耐受较高的盐浓度。关键词: 草坪草, 耐盐差异, 叶片显微结构

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Salt resistance between three kinds of turfgrass and the related research about their leaf microstructure

Abstract:

Abstracts: In order to understand the salt tolerance of Tall Fescue L., Poa pratensis L. and Lolium Perenne L., 8 different varieties, Festuca arundinacea L. (Barlexas, AridIII, Sunboy), Poa pratensis L. (Nassau, Bluechip, Merit) and Lolium Perenne L. (Prime, Focus) had been treated by nutrient solution in different concentration of NaCl. The results showed that: the critical concentration of salt of Poa pratensis L. was 200 mmol / L, the critical concentration of salt of Tall Fescue L. and Lolium Perenne L. was 150 mmol / L; salt-tolerance of the differences: Bluechip was the best, Prime was the worst. The related leaf microstructures have been observed also, that included bulliform cell, Vascular, Epidermic cell, stomatal apparatus, the results indicated: the capacity of salt tolerance of Poa pratensis L. was due to its microstructures similar with other salt-tolerant plants. Key words: turfgrass; salt resistance; leaf microstructure

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