

研究论文

植物生长调节剂克服甘薯近缘三倍体杂种2n花粉系与甘薯杂交低结实性的研究

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收稿日期 1998-3-17 修回日期 1998-7-11 网络版发布日期 接受日期

摘要 甘薯品种与三倍体种间杂种2n花粉系杂交, 用4种不同的植物生长调节剂配方克服其低结实性, 首次获得有生活力的后代植株. 观察上述杂交的花粉粒萌发, 花粉管生长, 卵细胞受精, 胚发育及种子形成的过程, 探讨了植物生长调节剂在其中的作用. 结果表明, 各种不同的植物生长调节剂配方都可以在一定程度上提高结实率, 其中以配方100 mg/L NAA+50 mg/L 6-BA和30 mg/L 6-BA+20 mg/L 2, 4-D的效果最好; 植物生长调节剂的主要作用在于促进受精卵细胞的分裂发育和延长子房寿命.

关键词 [植物生长调节剂](#) [甘薯](#) [种间杂种](#) [2n花粉](#) [低结实性](#)

分类号

Studies on Overcoming Low Seed-setting in Cross between Sweetpotato and 2n Pollen Clones of It's Closerel ated Triploidy Hybrid with Plant Growth R egulator

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Abstract Sweetpotato was crossed with 2n pollen clones of its interspecific triploidy hybrid, and treated with plant growth regulator, the first hybrid plant was obtained and the effect of plant growth regulator was studied during the germination of pollen grains, growth of pollen-tubes, fertilization of egg cells and development of embryos and seeds. The results indicated that the plant growth regulator can increase seed-setting rate, with 100 mg/L NAA+50 mg/L 6-BA as the best one, and plant growth regulator can promote the development of fertilized egg cells and prolong the lifetime of ovaries.

Key words [Plant growth regulator](#) [Sweetpotato](#) [Interspecific hybrid](#) [2n pollen](#) [Low seed-setting](#)

DOI:

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