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棉花航天诱变敏感材料的筛选及多态性分析

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Polymorphism Analysis and Sensitivity Materials Screening of Offspring of Cotton Varieties on Space Mutation

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摘要

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摘要 利用“实践八号”育种卫星搭载棉花10个品种(系),对SP₁代、SP₂代进行了突变体的筛选、DNA分子标记检测和田间农艺性状调查,研究棉花不同材料对航天诱变的敏感性。其中7个材料对航天有一定的敏感性,其分子标记多态性高,田间农艺性状变化明显。结果表明,太空能够诱导棉花种子发生基因变异,航天诱变可作为棉花种质资源创新和品种选育的方法之一。

关键词: 棉花 航天诱变 突变体 农艺性状 多态性

Abstract: Dry seeds of ten cotton varieties were carried by the Shijian-8 satellite for space mutation treatment. The SP₁ and SP₂ offspring of cotton varieties were used to screen mutants and analyze DNA molecular polymorphism and investigate the agronomic traits. The aim was to study sensitivity of cotton varieties under space mutation. The results showed that seven susceptible varieties were confirmed and expressed high polymorphism and changed significantly on the agronomic traits. These results indicated that the outer space mutation would be an effective method to develop new cotton varieties.

Keywords: cotton space mutation mutant agronomy characters polymorphism

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