

专论与综述

植物CMS/Rf系统的基因克隆及其结构特征

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摘要 细胞质雄性不育和恢复系统(CMS/Rf)在植物杂种优势利用中已被广泛应用。为阐明恢复基因在这一系统中的作用机理, 众多研究者开展了恢复基因的定位和克隆研究。近年来, 4个植物恢复基因的成功克隆有力地推动了这一研究领域的发展。本文综述了植物恢复基因的定位、克隆以及育性恢复分子机理的研究进展, 并讨论了恢复基因在植物分子育种上的应用。

关键词 [细胞质雄性不育; 恢复基因; 克隆; 分子机理](#)

分类号

Gene Cloning and Structure Characterization of CMS/Rf system in Plants

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Abstract

It has achieved great success in plant heterosis by using cytoplasmic male sterility and fertility restorer (CMS/Rf) system. In order to elucidate the action mechanism of Rf gene in this system, many researchers have been contributing themselves to map and clone fertility restorer genes in recent years. Four Rf genes were recently cloned successfully. Here we presented the overview of plant CMS fertility restorer gene mapping, cloning and its molecular mechanism. It was also discussed on utilization of fertility restorer genes in the molecular breeding in plants.

Key words [cytoplasmic male sterility](#) [fertility restorer gene](#) [cloning](#) [molecular mechanism](#)

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