

番茄属种间杂种离体培养F₁植株的细胞学分析¹⁾

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摘要 本文报道了栽培番茄(Lycopersico esculentum)“北京早红”等5个品种分别与野生型秘鲁番茄(L. peruvianum)PI128657中8号株系杂交, 离体胚培养, 得F₁杂种植株。对花粉母细胞在减数分裂中染色体行为和终变期二价体交叉点的频率, 以及亲和性程度等进行了分析。结果表明: 6个亲本植株花粉母细胞减数分裂染色体的行为是正常的, 中期I为12个二价体。其中环状二价体占多数, 棒状二价体数较少。中期I没有单价体。后期I和II均正常。四分体阶段无微核出现。但各亲本在终变期和中期I的环状二价体和棒状二价体的数有一定的差异。这可能与不同亲本基因型的亲和性程度和在遗传学上的不协调有关。5个组合的大多数F₁杂种花粉母细胞减数分裂中染色体行为基本正常。12个二价体占多数。但染色体配对不稳定, 有较多的单价体, 染色单体桥。四分体阶段有微核。此外, 在5个组合的F₁杂种植株中, 均出现双二倍体花粉母细胞。这些双二倍体花粉母细胞的染色体, 在减数分裂中, 也均出现落后染色体和染色单体桥, 以及较多的多价体。四分体阶段有微核和不同类型的四分孢子群。

关键词 [番茄,种间杂种,减数分裂,双二倍体](#)

分类号

Cyological Analysis of F₁ Plants of Tomato Interspecific Hybrid in vitro

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Abstract

<P> By means of young embryo culture,F₁ plants of the interspecific cross between Lycopersico esculentum (five culticvars)and L. peruvianum (Strain 8 of variety PI 128657) were obtained .The analysis of chromosome behavior in meiosis and frequency of bivalent chiasma at diakinesis of pollen mother cells of F₁ hybrid plants,and the affinity extent were reported in this paper. The test results showed that chromosome behavior of pollen mother cells of 6 parents in meiosis was normal. The chrommsome configuration was 12 bivalents at meptaphase I .Most of them were ring bivalent ,and a few of them were rod bivalent .There was no univalent at metaphase I.The meiosis behavior was all normal at anaphas I and II .The micronuclei were not observed in tetrad stage .Number of ring and rod bivalent was different at diakinesis and metapghase I of 6 parents .It is possible that the affinity extent of different parent genetypes extsts no corrdination in genetics . At meiosis chromosome behavior of pollen mother cells of most F₁ hybrid plants in five combinations was normal. Chromosome configuration usually was 12 bivalents ,but the chromosome pairing was not stable .There were a number of univalents and chromatid bridge ,Micronuclei were observed in the terrad stage .In addition ,the pollen mother cells of amphidiploid appeared in all F₁ hybrid plants of five combinations. The lagging chromosome,chromatid bridge and multivalent were observed in meiosis of pollen mother cell of amphidiploid .There were micronuclei and tetraspores of various types in the tetrad stage . </P>

Key words [Tomato Interpeacific hybrid Meiosis Amphidiploid](#)

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