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研究论文

连续自交对甘蓝型油菜(Brassica napus L.)胚胎发育的影响

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摘要 以自由授粉群体和品系间杂种为对照,研究了甘蓝型油菜连续自交后代在胚胎发育上表现的效应。自交后代的胚和胚乳发育在授粉5天以后开始落后于杂交组,致使自花授粉的成熟种子较小,且含油率降低。与自由授粉相比,自交组花粉管生长较慢,受精较晚,胚乳游离核数较少,原胚生长缓慢。自交后代中常发生单受精、合子或幼胚退化以及游离核胚乳解体等异常现象,同时在受精频率、游离核数和原胚细胞数方面的变异系数,都较自由授粉组为大,表明至少在胚胎发育前期,连续自交后代甚至比处于杂合状况的自由授粉群体更不整齐一致。讨论了变异发生的原因及预测自交衰退和杂种优势的可能性。

关键词

分类号

THE EFFECTS OF SUCCESSIVE INBREEDING ON THE EMBRYO DEVELOPMENT OF BRASSICA NAPUS L

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Abstract The effects of successive inbreeding progenies of Brassica napus L.on the embryo development were studied in comparison with the open-pollinated population and hybrids from inbred lines.5 days after polli-nation,the embryo and endosperm development in self-pollinat ed pro-genies began to fall behind crosspollinated treatment,causing smallerseeds and lower oil content in the self-pollinated ones.In contrast withopen-pollinated ones,there was a delayed growth of pollen tube, a laterfertilization,fewer free-nuc...

Key words

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