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玉米数量性状的遗传分析I.我国玉米自交系的遗传潜热及其利用

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摘要 以NC I交配设计和p(p-1)/2双列杂交设计抽样估计了我国玉米自交系总体和优良自交系亚总 体各数量性状的基本遗传参数。结果表明，大多数数量性状遗传方差的主要分量是加性方差 ，显性方差较小。优良自交系亚总体各性状的遗传方差则普通减小，说明其遗传基础更为狭 窄。所以，为了不断地育出更好的自交系间杂种，迫切需要补充新的基因源。而现有的一些 自交素和杂交种，则可以用合成综合种或复合种，再进行群体改良。这类群体由于加性变异 丰富，在选择下将能产生较快的育种进展。

关键词

分类号

Genetic Analysis on Quantitative Characters of Corn (Zea maize)I.Genetic Potential and Its Utilization of Corn Inbreds in China

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Abstract

Crosses were made between 52 lines randomly drawn from the population of corn in breads in China and between 7 lines from the sub-population consisting of excell ent inbreds,with NC I (North Carolina I) and p(p—1)/2 diallel mating designs re spectively.Form the differences among these hybrids,the basic genetic parameters of quatitative characters were estimated for the two parent's population apart. The results showed that the additive component in genetic variances of most char acters is principal,and the dominant one is secondary.In the sub-population,all genetic variances of characters are less than the corresponding ones in the popu lation.This indicates that the genetic base in the sub-population has been narro wed.In order to achieve the good succesive progress in corn single-and double-cr oss breeding,it is imperative that new genetic variability must be supplemented. But some inbreds or crosses on hand may tet be utilized to construct sybthetics or composites (crossed derivatives),so as to undertake the population improvemen t on them later.For these breeding populations,the outstanding response to selec tion may be expected owing to the abundant additive variation.

Key words

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扩展功能

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