

玉米隐性核不育双杂合保持系的选育: II. 提高保持系生活力的研究 The Study on Breeding Recessive Nuclear Male-sterile Maintainers in Maize: II. Raising the viability of Maintainers

季良越, 季洪强, 罗福和, 胡彦民, 黄西林 JI Liang-Yue, JI Hong-Qiang, LUO Fu-He, Hu Yan-Min, Huang Xi-Lin

河南农业大学农学系, 郑州 450002 Department of Agromomy, Henan Agricultural University, Zhengzhou 450002

收稿日期 修回日期 网络版发布日期 接受日期

摘要 试验采用两种方案选育不同自交系背景的隐性核不育双杂合保持系。不同保持系在成株率、双杂合体比例、花粉败育率等特性上有明显差异,表明不同自交系对染色体重复缺失承受力的差异,将双杂合结构转育到更多自交系背景中,有可能筛选出农艺性状优良、生活力强的保持系。通过同一自交系双杂合体互交或不同自交系双杂合体杂交,改良保持系农艺性状已初见成效。ms⁻²双杂合保持系保持雄性不育株率99.72%,符合生产杂交种子的要求。文章还讨论了两种选育方案的效果和保持系的应用前景。

Abstract: Recessive enic male-sterile double heterozygous maintainers in various inbred line backgrounds were developed using two different breeding procedures. The maintainers showed significantly differences in plant viability percentage, double heterozygote percentage, abortive pollen percentage and other traits. This implied different tolerances of various inbred lines to Dp-Df chromosome complement. Maintainers possessing good viability can be selected when double heterozygous constitution was transferred to more inbred lines. The agronomic traits and viability was improved by sibcrossing among double heterozygotes with the same inbred line background or crossing among different double heterozygotes. The maintainers could maintain 99.72% progeny plants to be male-sterile, this satisfies essential requirement for production of commercial hybrid corn. The merits and demerits of two approaches for breeding double heterozygous maintainers and the applied prospect of maintainers are discussed.

关键词 [核不育](#) [染色体重复缺失](#) [双杂合体](#) [双杂合保持系](#) **Key words** [Neucleus male sterility](#) [Duplicate-dificient chromosome complement](#) [Double heterozygote](#) [Double heterozygous maintainer](#)

分类号

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(820KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“核不育”的相关文章](#)
- ▶ [本文作者相关文章](#)

- [季良越](#)
- [季洪强](#)
- [罗福和](#)
- [胡彦民](#)
- [黄西林JI Liang-Yue](#)
- [JI Hong-Qiang](#)
- [LUO Fu-He](#)
- [Hu Yan-Min](#)
- [Huang Xi-Lin](#)

Abstract

Key words

DOI:

通讯作者