作物学报 2004 30 (11): 1159-1163 ISSN: 0496-3490 CN: 11-1809/S

研究论文

SSR标记辅助选择改良冈46B直链淀粉含量的研究

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收稿日期 2003-12-16 修回日期 2004-1-16 网络版发布日期 接受日期

摘要 本试验以美国光身稻Lemont作优质基因供体，优良籼稻保持系冈46B（G46B）为轮回亲本，利用与Wx基因紧密连锁的标记484/485对G46B/Lemont回交及其自交群体进行目的基因型选择,并对每一回交群体中的目的基因植株进行G46B遗传背景筛选。结果表明，在回交后代的自交群体中，分子标记484/485三种带型的直链淀粉含量表现为G型>H型>L型，L带型植株多为中等直链淀粉含量(17%～22%)。各回交后代与G46B的分子标记遗传背景平均相似率为BC1F1(48.25%)原 关键词 分子标记辅助选择 直链淀粉含量 保持系 杂交水稻

分类号 S511

Improvement of Amylose Content of G46B by SSR Marker-assisted Selection

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Abstract 484/485 tightly linked to wx gene is a marker relative to amylose content in rice endosperm. In order to improve amylose content of G46B, Lemont, a japonica cultivar with good grain quality, was used as donor parent. 484/485 and 136 SSR primers were used to screen offspring of G46B/Lemont in this study. The main results are as follow: (1) AC%-G>AC%-H>AC%-L, and amylose content of most plants with genotype L ranged from 17% to 22%. (2) The average similarity of genetic background by SSR markers between BCnF1 and G46B revealed the tendency of BC1F1 (48.25%) < BC2F1(68.82%) < BC3F1(83.95%). It was suggested that selection of amylose content in rice with 484/485 was effective，and the efficiency of breeding can be improved via genetic background screening by molecular markers and special marker selection.

Key words Hybrid rice；Amylose content；Grain quality；Marker-assisted selection（MAS）

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