

研究论文

水稻卷叶性状生理生态效应的研究 II. 光合特性、物质生产与产量形成

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收稿日期 2003-5-7 修回日期 2003-8-15 网络版发布日期 接受日期

摘要 以两个珍汕97B为遗传背景的卷叶近等基因系分别与明恢63所配的、叶型为半卷及平展的杂交组合为材料, 进行栽培密度试验, 对光合特性、物质生产与产量形成进行研究。结果表明, 卷叶的单叶正面光合速率稍低于平展叶, 而其背面光合速率稍高于平展叶, 叶片中后期衰老程度, 卷叶显著小于展叶; 群体光合速率、群体干物质生产以及产量, 均为低密度群体下, 卷叶低于展叶组合, 而中、高密度下高于展叶组合。

关键词 [水稻](#) [卷叶](#) [光合特性](#) [物质生产](#) [产量](#)

分类号 [S511](#)

Physiological and Ecological Effects of Crimpy Leaf Character in Rice (*Oryza sativa* L.) II. Photosynthetic Character, Dry Mass Production and Yield Forming

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Abstract Two combinations, whose male parent were the same variety Zhenshan 97B, and the female parent were two Near Isogenic Lines (NILs) with character of crimpy leaf and flat leaf respectively, were used to investigate Photosynthetic character, dry mass production and yield forming. The results showed that the photosynthetic rate in obverse side of crimpy leaf was lower than that of flat leaf, while vice versa in reverse side. Degrading rate of Leaf chlorophyll content in leaf senescence was lower in crimpy leaf population than that of flat leaf. Canopy photosynthetic rate, dry mass and yield in crimpy leaf population were relatively lower at low density, but higher at high density, as compared with flat leaf population.

Key words [Rice](#) [Roll leaf](#) [Photosynthetic rate](#) [Dry mass production](#) [Yield](#)

DOI:

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