

研究简报

水稻种质资源单叶光合速率研究

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摘要 对117份水稻种质资源不同生育期的测定表明, 始穗期至齐穗期光合速率比较稳定, 可代表某品种的光合速率用于品种间比较; 水稻品种间光合速率存在极显著差异。聚类结果将水稻品种划分为光合速率极高、高、中高、中低和低5个类群。净光合速率接近或大于 $25 \mu\text{mol} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$ 的高光合速率资源共有14份, 占测试材料的11.97%。其中籼稻有矮南早、特青、复粒稻、矮50、Ketan Bajong等, 粳稻有龙稻、农垦46和道光沙, 光身稻有Rico-1。并对光合速率与农艺性状的关系进行了研究, 结果显示高光合速率的资源具有株型松散适度, 叶色绿或深绿, 以及剑叶中等直立或近直立等特点。

关键词 [光合速率](#) [品种资源](#) [水稻](#)

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Single Leaf Photosynthetic Rate of Rice Germplasm Resources

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Abstract The measurement of 117 rice germplasm resources at different growing stages proved that the net photosynthetic rate (Pn) from initial heading to full heading stage was stable (Fig.1), which could be need to compare the varietal difference in photosynthetic rate. The result showed that different rice varieties had great difference in their photosynthetic rates (Table 1,2). The photosynthetic rate showed a normal distribution skewed (Fig.2). According to the result from clustering analysis, 117 rice varieties were classified into five groups, i.e. very high, high, middle high, middle low, and low of Pn. The photosynthetic rates were close to or higher than $25 \mu\text{mol} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$ in 14 germplasm resources, which accounted for 11.97% of the total materials tested, including Indica rice Ainanzao, Teqing, Fulidao, Ai50, Ketan Bajong, etc; japonica rice Longdao, Longken 46 and Daoshaguang; and Oryza glaberrima Steud Rico-1. The results of the relationship between agronomic characters and photosynthetic rate showed that the resources with high photosynthetic rate have such characteristics as green or dark green leaves, middle erective or nearly erective flag leaves and moderate loose plant type (Table 3).

Key words [Photosynthetic rate](#) [Germplasm resource](#) [Rice](#)

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