

农学—研究进展

水稻籽粒淀粉结构及其生物合成与米质关系研究进展

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摘要:

淀粉是水稻籽粒的主要成分,也是人们食物的主要能量来源。许多研究者开始关注淀粉的生物合成途径,以期通过控制这一途径,来改善植物淀粉合成的数量和质量。然而,这一目标实现需要广泛了解淀粉的生物合成以及淀粉的理化性质与淀粉颗粒结构之间的关系。对于淀粉颗粒的结构、组成及支链淀粉的链长分布,前人已做较深入的研究,并且对淀粉合成过程中的关键酶与米质主要指标的关系也进行了剖析。此文就淀粉合成和淀粉颗粒结构与稻米品质的关系展开综述,为水稻栽培和稻米品质改良提供理论依据。

关键词: 水稻; 淀粉合成; 颗粒结构; 米质

Advances of Research on the Relation of Starch Synthesis and Granule structure of rice to Grain Quality

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Abstract:

Starch is the main component of the rice grain, which is also the main energy source of people' food. Many researchers had begun to pay attention to the way of starch biosynthesis in order to control this way and to improve the quality and quantity of starch, which required a broad understanding of starch biosynthesis and the association between physicochemical properties and granule structure of starch. The structure and composition of starch granules and the chain length distribution of amylopectin had been previously done in-depth study, the key enzymes of rice starch biosynthesis and quality indicators had also been analyzed. In this paper, it was the relationship that between the biosynthesis and granule structure of rice starch and rice quality had been reviewed, providing a theoretical basis for the cultivation and improvement of rice quality.

Keywords: rice (Oryza Sativa L) starch synthesis granule structure rice quality

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