Effects of Nitrogen Fertilizer Treatments on Filling and Respiratory Rate of Caryopsis in Rice [PDF]

CHEN Juan WANG Zhong CHEN Gang MO Yi-wei
（Agronomy Department, Agricultural College, Yangzhou University, Yangzhou 225009, China）

摘 要：An experiment was conducted to study the effects of nitrogen (N) rate and application time on grain filling and respiratory trait of caryopsis in two rice varieties, IR36 and Dali. The treatments were consisted of no N application topdressing at both tillering and booting stages (CK), 6 g/pot of N topdressing at the tillering stage and 2 g/pot of N topdressing at the booting stage, 2 g/pot of N topdressing at the tillering stage and 6 g/pot of N topdressing at the booting stage. The results showed that the proper utilization of N fertilizer can be helpful to maintain the higher water content, higher respiratory rate and higher dehydrogenase activity of rice caryopsis in late filling phase, and prolong the course for filling and maintaining higher respiratory rate and dehydrogenase activity of rice caryopsis. More N application at booting was more effective compared to more N application at tillering.

关键词： nitrogen fertilizer; water content; filling duration; respiratory rate; dehydrogenase activity; ric
Rice Science. 2006, 13(3): 199-204

... ...