

## 氮肥与多效唑配合对稻麦两熟区机插水稻秧苗生长的影响

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Effects of nitrogenous fertilizer and pp<sub>333</sub> on the seedling growth of mechanical transplanting rice in wheat-rice double cropping areaYAO Xiong<sup>1</sup>, REN Wan-jun<sup>1</sup>, LAN Ping<sup>1</sup>, LU Ting-qi<sup>1</sup>, YANG Wen-yu<sup>2\*</sup>

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### 摘要

采用常规方法测定秧苗素质和产量, 弹簧秤法测定秧块盘结力, 参照GB/T 6243-2003 评价栽插质量等, 研究了氮肥与多效唑配合对稻麦两熟区机插水稻秧苗生长的影响, 并评价其栽插质量和产量。结果表明, 在机插秧苗的超秧龄特别是严重超秧龄阶段, 秧苗素质迅速变劣, 表现为株高急剧增加, 百株干重和根系活力迅速下降, 叶片丙二醛含量呈线性上升。一叶一心期追施适宜的氮肥并配以二次化控措施, 可使超秧龄机插秧苗保持较好的移栽状态和栽插质量, 保证其高产。在一叶一心期追施氮肥N 6 g/m<sup>2</sup>并配以100 mg/L多效唑浸种, 并在二叶一心期喷施250 mg/L多效唑能保持相对较好的秧苗素质; 关键栽插质量指标—漏插率可降低至8.5%, 并能获得9.95 t/hm<sup>2</sup>的较高产量。

**关键词:** 水稻 稻麦两熟区 机械化移栽 秧苗生长 调控 水稻 稻麦两熟区 机械化移栽 秧苗生长 调控

### Abstract:

The aim of the experiment is to study the effects of nitrogenous fertilizer and PP<sub>333</sub> on the seedling growth, transplanting quantity and grain yield of mechanical transplanting rice in wheat-rice double cropping area. The seedling quality and grain yield were analyzed by conventional physiological techniques, the roots twisting power was measured by spring balance, the transplanting quantity was evaluated by GB/T 6243-2003. The results showed that, in the over-optimum especially serious over-optimum stage of mechanical transplanting rice seedling, the seedling quality decreased rapidly, i.e. the plant height increase rapidly while the dry weight per 100 plants and root vigor decrease rapidly. Meanwhile, the MDA content of seedling leaf increased in line. Soaking seeds with 100 mg/L PP<sub>333</sub> and spraying seedling leaf with 250 mg/L PP<sub>333</sub> in 2.5 leaf age combining the application of 6 g/m<sup>2</sup> nitrogenous fertilizer in 1.5 leaf age, the seedling quality was better than other treatments, besides, the rate of empty-hole was 8.5%, the grain yield can reach to 9.95 t/ha. Thus, applying suitable nitrogenous fertilizer in 1.5 leaf age combined with two-time PP<sub>333</sub> can help to keep good initial transplant vigor and transplant quality, ensuring to achieve the high grain yield.

### Keywords:

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