

## 利用叶绿素计 (SPAD-502) 诊断水稻氮素营养和推荐追肥的研究进展

李刚华<sup>1</sup>; 丁艳锋<sup>1</sup>; 薛利红<sup>2</sup>; 王绍华<sup>1</sup>

1. 南京农业大学农业部作物生长调控重点开放实验室 江苏南京210095; 2. 中国科学院南京土壤研究所 江苏南京210008

Research progress on diagnosis of nitrogen nutrition and fertilization recommendation for rice by use chlorophyll meter

LI Gang-hua<sup>1</sup>; DING Yan-feng<sup>1</sup>; XUE Li-hong<sup>2</sup>; WANG Shao-hua<sup>1\*</sup>

1. Key Lab. of Crop Growth Regulation, MOA, Nanjing Agric. Univ., Nanjing, Jiangsu 210095; China; 2 Inst. of Soil Sci.; CAS; Nanjing; Jiangsu 210008; China

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**摘要** 叶绿素计 (SPAD-502) 在监测水稻氮素营养水平和及时提供追肥所需的信息方面有快速、简便、无损的特点,但其精度常受多种因素的影响。本文分析了影响利用SPAD-502叶绿素计诊断水稻氮素营养和推荐追肥精度的水稻品种、生育时期、测定叶位、测定叶片的位点、生态环境等因素。并综述了通过量化SPAD读数与氮的关系,提高诊断水稻氮素营养精度;通过量化SPAD读数与追肥关系,提高SPAD-502叶绿素计诊断法推荐施肥精度的研究现状;提出进一步提高利用SPAD-502叶绿素计诊断水稻氮素营养状况与推荐追肥精度尚需解决的几个问题。

**关键词:** SPAD 水稻氮素营养 氮肥推荐 SPAD 水稻氮素营养 氮肥推荐

**Abstract:** SPAD-502 meter provides a simple, fast and nondestructive method to monitor rice nitrogen status and predict the need for fertilizer-N topdressing on time, but the precision was influenced by many factors. Because SPAD-502 meter diagnoses the nutrient status indirectly by means of leave color (value of SPAD), it is important to understand factors that affect SPAD readings in order to improve its application purpose. In this paper, factors influenced SPAD readings, such as rice variety, development stage, the leaf position, the point on the leaf and environment were studied. The research progress on improving the precision of rice nitrogen diagnosis by quantifying the relationship of SPAD reading to nitrogen content, as well as nitrogen recommendation by quantifying the relationship of SPAD reading to topdressing were also reviewed. For a purpose of further improving the precision of nitrogen status diagnosed by SPAD-502 meter and fertilizer recommendation, few questions need to be settled was put forward.

**Keywords:**

### 引用本文:

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