

栽培技术

# 水旱轮作和旱地烤烟上部叶对氮素形态及用量响应的比较

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**摘要** 本文研究了硝态氮、铵态氮及其施用量对水旱轮作和旱地烤烟上部叶的生长、生物学重量和养分含量的影响。结果表明，硝态氮和铵态氮均能显著增加水旱轮作的烤烟与旱地烤烟烟株上部叶的长度和宽度；施用铵态氮的上部叶平均长度和宽度大于施用硝态氮的；不同氮素的施用量对旱地烤烟上部叶的长度和宽度的影响大于水旱轮作的烤烟；水旱轮作的烤烟和旱地烤烟上部叶的长度以及旱地烤烟的叶宽与烟叶中K含量有极显著正相关关系；水旱轮作的烤烟上部叶的长宽大于旱地烤烟。硝态氮、铵态氮肥用量旱地烤烟在0-75kg/ha、水旱轮作的烤烟在0-180kg/ha范围，上部叶的生物量随氮肥的增加而增加。硝态氮可促进水旱轮作烤烟P的吸收，但其用量过高也可使上部叶中P含量下降。在本试验条件下，旱地烤烟的施氮量不宜高于75kg/ha，而在水旱轮作的烤烟中则可在90kg/ha的基础上适当增加用量。

**关键词** [烤烟；上部叶；硝态氮；铵态氮；水旱轮作的烤烟；旱地烤烟；养分](#)

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## Comparing the effects of N in the forms of nitrate and ammonium and their application rates on flue-cured tobacco grown on paddy soil and dry-land soil respectively regarding the upper leaf growth

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### Abstract

The study investigated the effects of N in the forms of nitrate and ammonium and their application rates on flue-cured tobacco grown on paddy soil and dry-land

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soil respectively regarding the upper leaf's growth, the biomass and the nutrition up-taken. The results showed that the two forms of nitrogen significantly promoted the increasing of upper leaf's size both in length and width for tobaccos grown on the two types of soils; the analysis showed that they were positively correlated and in significant difference. The leaf length on both types of soils and the leaf width on dry-land soil were positively correlated with K content in the leaves and in very significant difference. There were obvious differences between the length and width of upper leaves of tobaccos grown on paddy soil and dry-land soil; the leaf size on paddy soil was bigger than the leaf size on the dry-land soil. When application rates of the two forms of N ranging 0-75kg/ha, the biomass of tobacco grown on dry-land soil was increasing as the N rate applied increased, but when the N rate was more than 75 kg/ha, the biomass decreased in some degrees; while the application rate of ammonium N the biomass of tobacco grown on paddy soil was increasing as the application rate of the two forms of N increased from 0kg/ha to 180kg/ha. P and K contents in upper leaves of tobacco grown on dry-land soil were much higher than that of on the paddy soil. The results suggest that N should be a little higher than that of the nitrate N. Under the conditions of this experiment, the N rate on dry-land soil should not surpass 75kg/ha, while on paddy soil, it could be a little higher than 90kg/ha.

**Key words** [flue-cured tobacco](#) [upper leaf](#) [nitrate nitrogen](#) [ammonium nitrogen](#) [paddy soil](#) [dry-land soil](#) [nutrition](#)

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