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## 太湖流域麦田土壤氮素流失过程的模拟研究

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Nitrogen losses under simulated rainfall conditions in rice-wheat rotation of Taihu lake watershed plain

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**摘要** 应用田间模拟降雨,研究了太湖流域稻麦轮作方式下,不同雨强和施氮水平对农田氮素径流流失的影响。结果显示,随施氮量增加,农田径流液中氮素的平均浓度和氮素径流累积流失量提高,两者间呈显著正相关。降雨量相同的条件下,低雨强农田产生径流时间较长,而高雨强引起的农田径流量较高;低雨强引起的农田氮素径流累积流失量较高,高雨强引起的农田氮素径流累积流失量较低,这种现象在中、高施氮水平条件下更为明显。试验还表明,在降雨量相同的条件下,降雨持续时间长的小雨引起的农田氮素径流流失量要超过降雨持续时间短的大雨。

**关键词:** 太湖流域 农田径流量 模拟降雨 农田氮素流失量 太湖流域 农田径流量 模拟降雨 农田氮素流失量

**Abstract:** Field trials of rainfall simulation were carried out to study effects of different rainfall intensities and nitrogen fertilizer application rates on nitrogen losses in rice-wheat rotation of Taihu Lake Watershed. It was showed that the mean concentration and accumulated amounts of runoff losses of nitrogen were highly correlated with N-application rates. With same total rainfall, runoff lasted longer under the low rainfall intensity than that under the higher one, but the total runoff amount is more under the higher rainfall intensity. While accumulated amounts of runoff losses of nitrogen under low rainfall intensity is more than that under higher rainfall intensity, which was more obvious with middle and high N-application rates. The experiment indicated that the lower rainfall intensity treatment, lasting longer time, caused more losses amounts of runoff nitrogen than that under the high rainfall intensity with same total rainfall amount.

**Keywords:**

### 引用本文:

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