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在土槽尺度下的硝态氮迁移模拟研究

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**摘要:** 农业非点源污染研究是当前环境问题研究领域的重点和难点。目前而言土槽尺度下非点源模型的研究较少。利用大型土槽和人工降雨装置来模拟无植被坡地单次降雨过程地表径流中硝态氮迁移过程。在此基础上, 适当选取ANSWERS-2000的子模块建立起具有一定机理的适用模型, 来研究土槽尺度下无植被坡地单次降雨过程地表径流中硝态氮迁移过程。经过三次实验验证, 模拟的径流总量误差在4%-15%之间, CP' A在0.7-1.2之间; 模拟的硝态氮总量误差的绝对值在9%-17%之间, CP' A在0.6-1.1之间。结果显示降雨径流、硝态氮浓度模拟结果与实际观测值有较好的一致性, 模型模拟效果较好, 模型可用于该尺度下硝态氮迁移量计算, 具有一定的研究参考价值。

**关键词:** 农业非点源污染; 土槽尺度; 降雨径流; 硝态氮; ANSWERS-2000模型; GREEN AMPT下渗模型; 迁移模拟

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