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## 南方红壤区不同利用土地产流产沙特征试验研究

### Study on runoff and sediment yield characteristics under different land uses in red soil area of Southern China

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中文关键词: [径流](#),[泥沙](#),[土地利用](#),[水土流失](#),[红壤](#)

英文关键词:[runoff](#) [sediment](#) [land use](#) [water and soil loss](#) [red soil](#)

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#### 中文摘要:

研究不同类型降雨下土地利用/覆被对水土流失过程的影响,对于科学指导植被建设和控制水土流失具有重要意义。采用人工模拟降雨的方法,对南方红壤区典型小流域8种不同利用土地的径流、泥沙在不同降雨条件下的流失特征进行了研究。结果表明,不同利用土地的径流和泥沙流失差异明显,且各利用土地的径流和泥沙流失的变化对雨量雨强变化的响应不同;相同降雨条件下径流调控排序为果园>旱平地>油茶>弃土场>水保林>坡耕地>水田>裸地,泥沙调控排序为果园>油茶>旱平地>水田>裸地>水保林>坡耕地>弃土场。因此,具有水土保持措施的果园保水保土最好,而裸地产流最大,坡耕地和弃土场泥沙流失最多,产流和产沙没有完全的对应关系,该研究结果为南方红壤区的水土保持规划与水土流失综合治理提供了基础数据和科学依据。

#### 英文摘要:

Effects of different land uses /covers on soil and water loss processes under different rainfall types had great significance to guide vegetation construction and soil and water loss control. Responses of soil and water loss characteristics to rainfall types were studied using rainfall simulation under 8 land use types in red soil area of southern China. The results showed that there were obvious differences in soil and water losses between different land uses. Responses of soil and water losses to rainfall amount and rainfall intensity were quite different and depended on land uses. The order of controlling runoff was orchard>arid flat field>camellia forest>spoil ground>water and soil conversation forest>slope land>paddy field>bare soil. The order of controlling sediment was orchard> camellia forest>arid flat field> paddy field>bare soil> water and soil conversation forest>slope land>spoil ground. Therefore, orchard with soil and water conservation measures had the best benefit of soil and water conversation. Runoff amount of bare soil and sediment amounts of slope land and spoil ground were the biggest among eight land uses. No direct relationship was found between runoff and sediment. This study provides basic data and scientific foundation for soil and water conservation planning and comprehensive management of small watershed in red soil region of Southern China.

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