应用生态学报 2005 16 (07): 1279-1284 ISSN: 1001-9332 CN: 21-1253/Q

研究报告

西南喀斯特地区退耕还林（草）模式对土壤肥力质量演变的影响

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收稿日期 2004-7-16 修回日期 2004-11-23 网络版发布日期 接受日期

摘要

采取4种不同退耕还林（草）模式对喀斯特严重侵蚀区进行了10年定位治理，2003年对各退耕模式及相应对照的土壤理化学性质、土壤微生物、土壤酶活性、土壤呼吸进行研究.结果表明,治理后土壤细菌、真菌、放线菌数量及微生物总数明显增加，土壤水解性酶和氧化还原酶活性及土壤呼吸作用强度得到显著加强，土壤养分贮量和速效养分供应强度得到明显改善，土壤肥力得到不同程度的恢复.土壤综合肥力评价表明，土壤综合肥力指标值（IFI）呈增长趋势.因此,采用合适的生物措施，辅于必要的工程措施，是改善喀斯特地区土壤肥力质量的有效途径之一.

关键词 喀斯特地区,退耕还林（草）,土壤肥力质量,综合评价

分类号

Effects of different de?farming and reafforestation patterns on changes of soil fertility quality in karst region of southwestern China

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Abstract

A ten-year fixed site harnessing was conducted in the severely eroded karst region of Ziyun County,Guizhou Province by adopting four different de?farming and reafforestation patterns,and the properties of soil chemistry,soil microbiology,and soil enzymology after harnessing were determined in 2003.The results showed that the total amount of soil microbes and the individuals of bacteria,fungi and actinomyces were increased obviously,the activities of soil hydrolytic and oxidoreductive enzymes and the soil respiration rate enhanced evidently,and the storage of soil nutrients as well as their supplying intensities promoted pronouncedly,demonstrating that the soil quality in all adopted patterns was improved in varying degrees.The values of soil integrated fertility index (IFI) had an increasing trend. Therefore,proper biological measures and essential supplementary engineering measures were effective in improving the soil fertility quality of severely degraded karst region.

Key words

Karst region De-farming and reafforestation Soil fertility quality Comprehensive evaluation

DOI:

通讯作者