

农业生态与环境科学

## 退耕还草坡耕地水土保持效应的研究\*

车伟光<sup>1</sup>; 赵小社<sup>2</sup>

1. 云南农业大学园林园艺学院, 云南 昆明 650201; 2. 云南农业大学动物科学技术学院, 云南 昆明 650201

收稿日期 2007-1-12 修回日期

**摘要** 2002~2004年在金沙江流域海拔2000m的半山区进行退耕还草试验。结果表明, 多年生黑麦草和白三叶混播组合在植被覆盖度和生物量均高于其它混播组合, 土壤抗剪强度与根系密度呈显著的正相关 ( $P < 0.05$ ), 可作为衡量土壤耐侵蚀能力的一个参考指标; 与撂荒坡地相比较, 人工混播草地土壤的抗崩解时间延长219~583h, 地表径流量减少42.1%~52.73%, 土壤侵蚀量减少66.45%~70.25%; 退耕还草表现出良好的水土保持效应, 也为山区群众发展草食动物提供了大量的饲草, 收到了良好的经济效益。

**关键词** [退耕还草](#) [水土保持](#) [土壤抗剪强度](#)

分类号 [S 152.71](#)

## Soil-water Conservation Function of Artificial Grassland Returning from Sloping Fields

CHE Wei-guang<sup>1</sup>; ZHAO Xiao-she<sup>2</sup>

1. Faculty of Landscape and Horticulture, Yunnan Agricultural University, Kunming 650201, China; 2. Faculty of Animal Science and Technology, Yunnan Agricultural University, Kunming 650201, China

### Abstract

Two years establishment of artificial grassland was made in the Jinsha River Valley of mountain area with elevation of above 2000 metres at Yiliang county in Yunnan Province. The result showed that the combination of *Trifolium repens* and *Trifolium repens* were higher than combinations for vegetative coverage and biomass. It is in most close relations ( $P < 0.01$ ) between soil anti-shear strength and density of roots. So anti-soil shearing strength may be an index of anti-soil erosion. Compared with control, anti soil lose-breaking time of the artificial grassland lengthen 219~583h. 42.1%~52.7% of flowing water on the earth's surface of the artificial grassland were reduced. 66.45%~70.25% of the soil-erosion amount of the artificial grassland were reduced. Artificial grassland returning from sloping fields showed the good soil-water conservation function and more forages for the villager of the mountain region.

**Key words** [artificial grassland](#) [soil and water conservation](#); [anti-shear strength](#)

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