

## Controlling Model of Soil and Water Loss and Revelation to the Development of Green Agriculture in Changting of Fujian ,China

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**Abstract:** Changting County is located in south hilly red region of China and face the most serious soil and water loss; as a result it restricts the deveolopment of local economy. After more than 10 years comprehensive managements ,the soil and water loss is greatly reduced and the ecological environments is significantly improved ,it promotes the development of farming ,breeding and processing industry ,raises the farmer incomes greatly ,and achieves good ecological benefits ,economic benefits and social benefits. This paper presents the controlling patterns of water and soil erosion in Changting County ,including comples governing mode of planting forest and grass in moderate and intensity erosion region. the pattern of planting grass in the soil surface in all erosion region ,cycle mode of orchard in mountain ,comprehensive agricultural development mode for upgrading industries and typical watershed management mode ,etc. The stage experience of controlling water and soil erosion in Changting County showed that it must rely on advanced science and technology and close cooperation and coordination of different branches for controlling water and soil erosion. In this paper ,we also put forward some suggestiions for the future managements of soil and water loss ,and then promoted mountain agriculture sustainable development in red area of south of china.

**Key words:** water and soil loss; management mode; management effectiveness; ecological construction

### 封面照片: 黄土洼天然滑塌淤坝

黄土洼天然淤地坝(37°19'N,109°59'E附近)位于陕北榆林市子洲县南部裴家湾镇黄土洼村,为无定河一级支流淮宁河中段的庞家沟流域上游,属于黄土梁峁丘陵沟壑区。明隆庆三年(公元1569年),黄土洼九牛山山体发生滑塌事件(称古滑塌),将黄土洼沟谷主沟道掩埋,形成“闷葫芦”型(水和沙都不出坝)的天然淤地坝体系,当地称“湫滩”。坝内淤地海拔1 058~1 061 m,周围梁峁丘陵最高海拔可达1 274 m。现今大坝以上流域面积2.4 km<sup>2</sup>,淤地面积0.478 km<sup>2</sup>,地平如砥,飞机鸟瞰拍片,九沟十八岔,状如人参;四周十座大山,环形相连,组成了“湫滩”的屏障。黄土洼是目前黄土高原地区发现的时间序列最长、面积最大的全冲、全淤型天然“聚淤”,有“淤地坝的鼻祖”之称。封面图为黄土洼天然淤地坝的最大支沟之一,称虎玉子沟;右图为天然坝地内主坝内的土路中央,可以看到,随着坝地淤高和当地村民将主坝内沟坡脚脚的黄土,人为码平到沟道内,以增加坝地的面积,使坝地边坡坡度增大,黄土洼梁峁在坝地的衬托下显得低矮了一些。黄土洼天然坝地内地势平坦,土壤肥沃,适宜种植喜水的玉米,旱涝保收,产量可达9 000~12 000 kg/hm<sup>2</sup>。照片摄时间是2012-11下旬,此时的陕北开始入冬,草木枯黄。

(李奎)

