

摘要

鋪網噴植工法為崩塌地植生工程中最常使用的工法之一，然噴植工法通常以快速植生覆蓋為設計目標，故常易造成施工區域之目標草類或非目標植物過度強勢生長，而影響後續植生演替。以石門水庫集水區為例，崩塌地經整治過後，常見賽芻豆或羅滋草草生地單純植相，其他木本植物無法順利入侵生長，造成整治復育成效受到外界質疑。

本研究選取石門水庫集水區內崩塌地施工區域，蘇樂橋羅滋草草生地與高義橋賽芻豆草生地，分別進行植物生長與入侵演替機制之試驗研究：

一、針對蘇樂橋噴植施工個案中，原基地保留植群進行研究，以瞭解其在羅滋草草生地內拓展入侵生長之原因與機制。

- (1) 蘇樂橋植群之木本植物有 10 科 18 屬 20 種，共 144 株，構樹和水雞油為此樹叢的優勢種。
- (2) 此區木本植物演替機制以種實雨和殘株萌蘖為主要，而坡面上的土壤分布可能為影響入侵生長的原因之一。
- (3) 羅滋草全面覆蓋後演替困難，樹叢之保留與後續之拓展有抑制羅滋草生長之情形。

二、清除賽芻豆並觀察植物自然入侵之情形。

- (1) 入侵植物以昭和草為主，但無論僅清除地上部或連地下部一同清除之試區，其入侵狀況均差異不大。
- (2) 入侵植物於成長期若無法克服不利的環境因素，很快的就會被適應力強的賽芻豆取代，使得處理區最後再次成為單純植相。

關鍵字：羅滋草、賽芻豆、種實雨、土壤種子庫、萌蘖

Abstract

Hydroseeding method with netting is one of the most common methods of vegetation engineering in landslides. The aim of hydroseeding is usually designed for quickly vegetation recovering so it's easy to cause some vegetation overgrown and to have a impact on plant seccession. For example, in Shihmen reservoir watershed, there are many pure siratro(*Chloris gayana*) or Rhodes grass(*Macropitilium atropurpureus*) grassland in landslides after regulation, and it's hard to process tree invasion and well done plants succession.

In the research, two landslide areas with planting measures which are Sule Bridge and Gaoyi Bridge in Shihmen reservoir watershed are selected as the investigation areas of plant growth and succession mechanism. Results obtained are summarized as follows:

1. The tree invision and plants succession in Sule Bridge.
 - (1)Thera are 10 ordinal 18 family 20 species 144 arboreous plants in the plot. Among woody plants, *Pouzolzia elegans* and *Broussonetia papyrifera* are dominance.
 - (2)The succession mechanisms of trees in the plot are seed rain and sprouting, and soil distribution probably is one of influence of tree invision
 - (3)Rhodes grass is hard to grow in trees in the plot.
2. Mowing siratro and observing condition of plants invasion.
 - (1)*Crassocephalum crepidioides* is the major invasive plant, but it doesn't make big different between mowing or removeing the whole crown. In the plot where siratro is mowed, siratro had a quick recovery.

(2) If invasive plants can't adapt to environment conditions, it is easy to be replaced by siratro.

Key words: siratro, Rhodes grass, seed rain, soil seed bank, sprouting