

植生噴植對抗沖蝕網毯效率之影響

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摘 要 本研究主要以環絨狀植生網及加勁抗沖蝕植生網等兩種網毯，於 36° 之坡度及 100 mm hr⁻¹ 下，以 ASTM D7101 標準方法於室內進行模擬土壤沖蝕試驗，目的在於植生與否或噴植噴植材與否對該兩種網毯的抗沖蝕效率及作物與管理因子(C 值)的變化。研究結果顯示，鋪設環絨狀植生網後約可減少 40% 之土壤流失量，覆蓋後 C 值約為 0.64。鋪設加勁抗沖蝕植生網可減少 95% 之土壤流失量，覆蓋後 C 值約為 0.05。此外，本研究亦指出，鋪設環絨狀植生網的同時，噴植固定比例之噴植材可使環絨狀植生網的抗蝕效率提升至 90% 以上，待百喜草生長至覆蓋率約 40% 之同時，抗蝕效率提升至 92% 以上，C 值亦可降至 0.07 以下。

關鍵詞： 抗沖蝕植生網、噴植材、沖蝕量、作物與管理因子。

The Efficiency of Rolled Erosion Control Products (RECPs) with and without Spray Planting

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ABSTRACT This study aims to evaluate the efficiency of erosion resistance of 2 rolled erosion control products (RECPs) including circled pile mesh (CPM) and reinforced geogrid (RG) with and without spray planting. Under an artificial climate (100 mm hr⁻¹) and a slope gradient (36 degree), ASTM D-7101 was used to determine the soil losses of each treatment. The results indicated that application of CPM could decrease soil losses at least 40%, and C value could be about 0.64 as this product was used. As application of RG, the soil loss decreased 95% as comparing with the control, and the C value was 0.05. Additionally, soil loss contents will decrease about 90% compared with the control as application of CPM with spray planting method. Under 40% of cover ratio of grass for CPM treatment, the soil losses decreased 92% and the C value could be equal to 0.07. Our results indicated that simultaneous performing of spray planting and application of CPM could obviously increase efficiency of the RECPs.

Key Words: RECPs, hydroseeding materials, soil loss, C value.

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