

Sustainable Hillside Farming Systems for the Eastern Caribbean

C.A. Madramootoo, G.T. Dodds & P. Norville

Abstract

Soil erosion on tropical hillside lands is an increasing problem. Traditional subsistence farming practices of shifting cultivation, especially without soil and water conservation measures are unsustainable. Agronomic and physical measures to reduce soil erosion and render hillside agriculture sustainable are outlined. A case study in Saint Lucia showed that terraced, strip-cropped and contour-drained hillside plots had low rates of soil loss, with the terraced plot showing the least soil loss. However, the terraced plot showed the lowest overall crop yield due to soil disturbance during construction and the smaller land area available for planting. An economic analysis of construction and maintenance costs indicates that expensive bench terraces are beyond the means of most small farmers, and that government support or incentives are needed for implementation of these techniques.