

ชื่อเรื่อง

**Calibration of Rusle with Vetiver Grass as Life Sediment Filter in the Hills of Puerto Rico**

ชื่อผู้วิจัย

Luis R. Pérez – Alegria, Ph.D., P.E. and Luz Cruz MSc (c)

ชื่อหน่วยงาน

Agricultural Engineering Department, University of Puerto Rico, PUERTO RICO

ปีที่ดำเนินการ

ปีที่พิมพ์รายงาน

**Abstract**

Vetiver is being evaluated and considered, along with other conservation practices, as a viable alternative for erosion control and reforestation of large clear areas. Research to calibrate the performance of vetiver as a live sediment filter is in progress; the Revised Universal Soil Loss Equation (RUSLE) is being used as the prediction model in very steep slopes subject to several management practices including denuded areas.

Vetiver barriers have been planted at 30 foot intervals in a 100 percent slope planted in an intercrop of pigeon pea and celery in the town of Jayuya, Puerto Rico. A sediment collection equipment was designed, built and installed before and after each vetiver barrier. Sediment accumulation behind the barrier is measured after every rain event with surveying equipment. The farmer has collaborated in all aspects of the work from planning, contouring, planting to data collection.

The result of this experimental work will be used to develop guidelines for use of vetiver in the hills of Puerto Rico and other tropical islands with similar ecosystems and under agriculture and in construction sites and along road banks to reduce the high level of sediment yields from most agricultural watersheds in tropical environments.