

The Fifth International Conference on Vetiver (ICV-5)

Vetiver and Climate Change

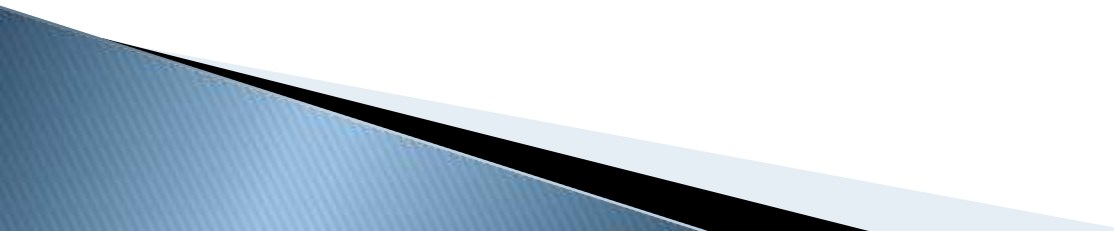
Lucknow, India, October 28-30, 2011

Application of Vetiver System for Erosion Control in Brazil

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Introduction

- ▶ Extreme weather, heavy rain, and poor soil causing severe erosion, especially on disturbed land in Brazil
 - ▶ Traditional solutions such as rock and concrete structures are expensive and not practical in steep slopes
 - ▶ Therefore Bioengineering using Vetiver Grass is the best and most economical option
- 



A typical highly erodible site like this are common



Note the large scale of the erosion on this highly erodible slope



Hydroseeding after minimal surface repair



Coconut blanket laying



Wire mesh laying for extra structural protection



Planting on very steep slope requires security rope



Using sharp poles to pierce coconut blanket for planting



Vetiver emerges through coconut blanket



Grass straw blanket



Vetiver plants ready for planting



Vetiver planting on combination of coconut blanket and Bermalonga, (a Deflor product made from straw and coconut fiber) on highly erodible sites



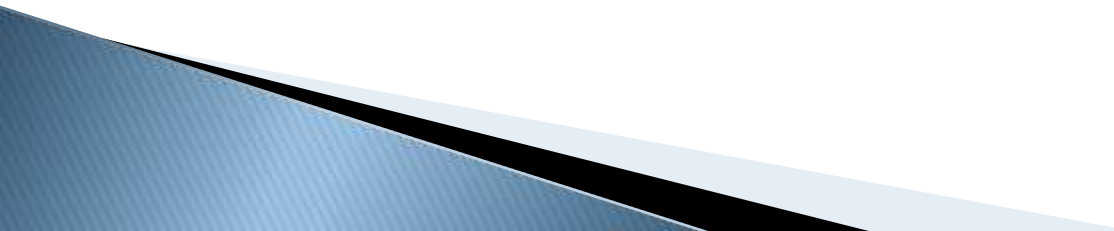
No sediment in the table drain



Toe slope protection.

Before and After

The following slides show the effectiveness of cocoblanket and vetiver grass

- ▶ On highly complex cut and fill slopes
 - ▶ Under extreme weather, heavy rain, and poor soil
 - ▶ Very steep and long slope requiring extensive terracing
- 



Vetiver planting on contour line on slope protected with coconut blanket



Two weeks after planting



Three weeks after planting



A highly complex set of cut and fill slopes



Two weeks after planting



Three weeks after planting



Four weeks after planting



Five weeks after planting



Two months after planting



Two months after planting





Another examples of very complex set of cut and fill slopes



A very steep and long slope requiring extensive terracing



Two weeks after planting



Five weeks after planting



Two months after planting



Two months after planting



A well protected industrial estate



Typical erosion without blanket and/or Vetiver Grass



Ineffectiveness of grass turf on steep slope, poor soil, short roots and dry conditions (no growth)



Nursery in Minas Gerais, Brazil.

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Thank You!!!

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