

## **Vetiver Grass – The Community “Glue” Pot.**

Looking back some 20 years when John Greenfield (this years Norman Hudson Award winner) first introduced vetiver grass technology to India, and thereby initiating the renaissance of the technology, its use and application has far exceeded our original hopes and aspirations. As its use for protection of infrastructure and for improving water quality expands, it would seem that soil and water conservation applications are not accelerating fast enough.

Recently I was looking at some present day images of cassava related erosion problems in Vietnam – horrendous! They reminded me of scenes I had seen in northern Thailand some 15 years ago. In both instances large areas of cassava were under cultivation without any protective conservation work. There is clear research evidence that vetiver grass hedgerows are a very effective means of controlling erosion in cassava fields (generally acidic and infertile soils) and at the same time improve crop yields substantially. I give two examples: (1) Experimentation carried out by CIAT (Colombia – rainfall 1240 mm) in 1991 showed that with cassava, planted on the flat in association with vetiver hedgerows, yielded 34 tons per ha, and compared to bare earth soil loss was reduced from 142 tons per ha to 1.3 tons and rainfall runoff was reduced to 3.6% of total; and (2) the National Institute of Soils, Vietnam undertook, over three years, extensive trials and concluded: “Vetiver grass exists in Viet Nam. It can be used as one of the species in hedgerow farming systems on sloping lands for erosion control together with *Tephrosia candida* and other hedgerow species. It can decrease soil erosion by 50-90 % and increase crop yields by 15-30 %. There is no competition of water, nutrient and light in the vetiver hedgerow farming systems, and no negative effect in alley crops. Combination of vetiver grass and *Tephrosia candida* is best for soil conservation, increased crop production and higher economic return. Farmers on sloping lands are interested in applying vetiver grass on their household farm to protect their soil, especially after land allocation to the farmers for long-term land-use right”.

Of course vetiver grass technology is effective on most other soil types, and the Vetiver Network receives research and reports from many parts of the world indicating that increasing number of farmers are successfully using the technology. Sadly the uptake of vetiver grass erosion control technology and other conservation technologies continues to be slow, and erosion and water conservation continues to be a major problem worldwide.

Land ownership is one of the keys to advancing the uptake of on-farm conservation. I have seen in China how farmers respond to improved “rental” agreements that give them land tenure rights of 30 years or more – conservation is an important part of that package. We have learned from Madagascar how farmers have very effectively used vetiver grass technology when given proper rights to farm the Fianarantsoa railroad right of way (see [http://www.vetiver.org/ICV3-Proceedings/MAD\\_rail\\_stab.pdf2.pdf](http://www.vetiver.org/ICV3-Proceedings/MAD_rail_stab.pdf2.pdf)).

It also seems that in some countries that there is an absence of soil conservation policy and that government services are not very good promoters of conservation technology.

Instead there is a need to rely more on the private sector, communities, and non government organizations (although often the latter are not that good either). The example of the East Bali Poverty Project in Indonesia ([http://www.vetiver.org/INR\\_East%20Bali%202006.pdf](http://www.vetiver.org/INR_East%20Bali%202006.pdf)) gives one hope that community involvement and improved education can go a long way in the introduction of better conservation.

The Vetiver Network supports soil and water conservation – period – whatever the technology maybe. However, it promotes the Vetiver grass technology for soil and water conservation because it is low cost, simple and effective. Further when promoted as part of the Vetiver System the users have the unbelievable opportunity to use the grass for a wide range of uses and applications. It is this wide range of uses (see <http://www.vetiver.org>) that makes it so attractive, and it is important that promoters of vetiver for soil and water conservation should make users aware of these other uses. Vetiver grass is indeed the “glue” that can hold a community and its environmental assets together.

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