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INTRODUCING THE POWER OF VETIVER AND THE INDONESIAN VETIVER NETWORK

By David Booth

"It's just a grass. How can it stop serious soil and road erosion? Won't it spread like other weeds and take over my garden?" These are typical comments/questions from most people introduced to Vetiver grass for the first time.



Vetiver borders enable the first lettuce harvest in community learning garden

I reported in our November 2003 Newsletter about my trip to China to attend the Third International Conference on Vetiver and Water (ICV-3) to receive the 1st prize award for "Research and Development of the Vetiver System for Innovative Use in Asia" for our paper (co-authored by Ardika Adinata, EBPP Vetiver Supervisor) entitled "**Vetiver Grass: A Key to Sustainable Development on Bali**". There I heard firsthand of some amazing work being done by people all around the globe, putting Vetiver to the test in many different and difficult situations. All were success stories. Interestingly, during a recent internet search for international updates on Vetiver updates, I came across a very appropriate anecdote from Criss Juliard, a very well known and respected

Vetiverite, demonstrating the power of an established Vetiver root system:

"This account, reported in Quandong, vol 24 #4, 1998, is a powerful testament to the root system of this grass. Vetiver grass is heavily promoted by some for erosion control. The author, Criss Juliard in Madagascar, said two men in a 4x4 vehicle got stuck in a ravine. They hooked the winch to a nearby tree and actually uprooted the tree, leaving the vehicle unmoved. They then hooked it to a nearby bridge, and damaged the bridge without freeing the vehicle. As a last resort they wrapped a rope around the base of a large clump of vetiver grass, hooked the cable to the rope and slowly freed the vehicle."

This introduction to Vetiver is the first in a series of articles I will write in my position as Coordinator for the Indonesian Vetiver Network (IDVN), to introduce the power of Vetiver (*Vetiveria zizanioides*) to Indonesia. The aim is to promote Vetiver throughout Indonesia and dispel the widely held belief that Vetiver is *only* good for producing aromatic essential oil from the roots and for producing handicrafts. In our efforts, we will be supported by the Pacific Rim Vetiver Network (of which IDVN is part), and a wide range of Vetiver experts around the world who have given us great support and guidance over the last five years.

In this opening section, I will refer to specific descriptions and examples given by some of the world's Vetiver experts, followed by specific applications by East Bali Poverty Project team, either in our village or from some of our clients in Bali.

Introduction to Vetiver Grass⁽¹⁾

“Although Vetiver grass (*Vetiveria zizanioides*) has been used for land protection purposes for about 50 years, its real impact on soil and water conservation was only started in the late 1980's following the promotion by the World Bank through the Vetiver Network which was established by Dick Grimshaw.



New mountain Vetiver nursery on land that could never be used due to sheer slopes

The Vetiver Grass System (VGS) was first developed to protect farmlands from soil erosion and to conserve water. While this application still has a vital role in agricultural lands, its tolerance to highly adverse soil conditions will play a key role in the ever increasing field of environmental protection. In addition, the special physical and morphological attributes of vetiver grass provides unique opportunities for engineering applications.”

EBPP example: Since mid-2000, EBPP field team has succeeded working with the children in all four of our integrated education programmes developing successful organic vegetable school gardens, in some cases on 30-40 degree slopes that previously were not even used to plant cassava and corn – thanks to the initial stages of planting Vetiver grass to stabilise newly cut terraces in the sandy slopes. The children’s parents followed their example, rapidly realising that their future did not need to be as poverty ridden as their past. They were right. With their motivation, determination and hard work they saw the fruits of their new challenge: a crop of delicious lettuce harvested from both the

children’s school garden and the parent’s community garden was packaged and sold to the Bali Dynasty Resort on 19th of March 2004. Vetiver has opened the door to sustainable social and economic development. The power of Vetiver has enabled the most isolated communities to see a future that their land can provide for them – thatDAVID DO THIS!

Uses of Vetiver

The many uses of Vetiver have been summarized in a Vetiver Grass Technical Specification on The Vetiver Network homepage www.vetiver.org as follows:

- On farm soil and water conservation
- Soil and embankment stabilization
- Land Rehabilitation
- River, canal and drain bank stabilization
- Water quality improvement
- Pollution Mitigation
- Aromatic oil from roots for perfume industry
- Thatching,
- Fodder (when properly managed)
- Mulch
- Paper making
- Medicinal
- Greenhouse gas mitigation
- Handicrafts



Ardika show simple method to measure correct stem & root lengths before planting

EBPP examples: We have experimented with most uses of Vetiver except water quality improvement, pollution mitigation, aromatic oils, paper making, medicinal and greenhouse gas mitigation. Bearing in mind that all of our trials with Vetiver to date have been pilot projects in solving particular problems, I do hope that in the not too distant future, with the support of the general public, other NGO’s and government organizations that we will be able to open up the complete potential of Vetiver to Indonesia.

What is a Vetiver Network?

I quote below the opening section on the definition of a Vetiver Network sent to me, provided by Criss Juliard, a Director of The Vetiver Network:



Ardika trains Pemuteran farmers so that they can reforest dry North Bali hills

“The network is actually a network of individuals or groups or institutions that have a common goal which is to see vetiver used as much as possible and that everyone tries in each his own way to help others by sharing information and experience. It is not about a creating an official or formal structure. A national network only exists when it does something concrete such as bringing researchers together or extension personnel, publishing documents on how to use vetiver in locally applied ways, all of which is done in a voluntary fashion. A network brings together people having good will and intentions but most of it brings together people who are dedicated to the cause. There is a sense of transparency, that is to say that information is exchanged with everyone and

especially with network members. It is a sort of “gentlemen club” where everyone acts cordially in the spirit of service orientation. There is no room for people who wish to keep the information to themselves. The network does not have a formal structure with a Director with an office and staff. The network is actually a form of anti-bureaucracy; it operates with the least amount of rules and regulations possible.”

Two of the key functions I envisage for a successful Indonesian Vetiver Network are: (a) creating global awareness of the many properties and uses of Vetiver is helping to prevent some of the serious landslides that have claimed many lives in Bali over the last few years at the height of the rainy season, and (b) providing a means for subsistence farmers, especially in semi arid areas such as the village EBPP is now active, to get much more beneficial use of their land to provide a sustainable future for their families, children and grandchildren by growing more and better crops to not only satisfy their nutritional needs but also to have surpluses to sell. The potential is enormous, if only they knew how.

Training courses

We at EBPP are firm believers in introducing new ideas through children – with proven successes in all of our programmes. Hence, we are presently designing training courses, based on our experience and information gleaned from successful Vetiver networks around the world, for four categories of learners: illiterate subsistence farmers; school children in rural areas where farming is their key livelihood; children in city schools who can be the pioneers of more advanced uses of Vetiver; and university students who are studying engineering, forestry, agriculture and water treatment.



Ardika teaches the children starting with a Vetiver



Children in Singaraja boarding school proudly

Bali Vetiver Conference

We held our first Vetiver Conference in Bali on 31st May 2000, just two months after we had planted our first Vetiver to stabilise the very steep and sandy verges of a newly stabilised dirt road, allowing first time access by road for the 700 of the most isolated families high up the slopes of Mounts Agung and Abang. The conference, jointly hosted with me by Philippine Vetiver expert, Dr Ed Balbarino, was a success in that we attracted a wide audience of Indonesian Government officials, expatriates, agriculturalists and students. At that time we were unable to provide many examples to prove the power of Vetiver. Now we are. Hence we plan to hold a second Bali Vetiver Conference this year (date and venue to be decided) where we hope to attract participation from Vetiver experts around the Asia Pacific region. Please join us.

How you can help to make the Indonesian Vetiver Network (IDVN) a success

I would be glad to hear from anybody with expressions of interest in either learning more about how you can use and/or help promote Vetiver, and joining the IDVN. Any comments and/or suggestions will be welcome, especially from people who have had experience with Vetiver in the past. Please help us to help Indonesia in accepting Vetiver for the better good of all who live in this special country.

For more information on any of East Bali Poverty Project activities or if you would like to support us, please call me on (0361) 410071, email info@eastbalipovertyproject.org or check our Homepage: www.eastbalipovertyproject.org

References:

1. *An Overview on the Application of the Vetiver Grass System in Asia-Pacific and Southern African Regions*, by Dr Paul Truong, Leader, Erosion Control and Slope Stabilisation, Resource Sciences Centre, BRISBANE, AUSTRALIA.