

**REPORT ON THE APPLICATION OF VS
IN THE SODIC-SALINE “DESERT”
OF VIETNAM**

BACK GROUND

It is rather strange that a region in lower central Vietnam has a climate and “soil” type similar to the commonly known desert around the world.

This region is in the Ninh Thuan, Phan ri and North Binh Thuan provinces- local known as desert in Vietnam

- The “soil” or rather sand is sodic-alkaline, with a calcic horizon, high in gypsum,**
- pH is high 8-9**
- Very high in soluble salt**
- Annual rainfall less than 300mm, last year: <200mm**
- Extremely hot and dry wind (40oC) in the summer, locally know as Laos wind.**

Introducing LE VAN DU

Le van Du is the Leader of the VS Program on Extreme Acid Sulfate, saline and alkaline soil in Vietnam

He has achieved exceptional results in the use of vetiver to rehab/stabilise canal bank erosion in extremely acid soil of the Mekong delta as part of the Donner Foundation grant. When this project was completed in 2002, he continued to work in this area until now, with funding support from local business. He is a lecturer at the Faculty of Agriculture, Ho Chi Minh City University, Saigon

Du was invited to present the results of his works at the Fifth International Acid Sulfate Soils Conference, Australia in 2002. The title of his paper: *Vetiver Grass System for Erosion Control on Drainage and Irrigation Channels on Severe Acid Sulfate Soil in Southern Vietnam*

I would recommend funding support for him when available, to continue and extend his work into other trouble soils and region of Vietnam

Paul Truong

LE VAN DU'S PRELIMINARY REPORT

- With the average annual rainfall of less than 300mm, and last year less than 200mm was received.
- Under these extremely harsh environment, Vetiver grew 2-3 folds faster than on any other crops on this soil and climate.
- Fresh biomass reached 25-30 ton/ha in the first 2 months and 50ton/ha after 3 months. Remember that no rain during that time!
- VG root was deeper than 70cm in 3 months and penetrated through the gypsum layer.
- When the green vetiver shoot and leaf was composted and used for corn and grape crops. The results was unbelievable
- I will write complete report for you later.

Vetiver crop 2 months after planting



dung dich
PAEM

น้ำ 10

น้ำ 10

22 10 2005

From a single culm to this in 3moths



A very poor corn crop



Note the “soil” in this desert region



The reasons why there was so much discrepancy in growth between Vetiver and corn

- **Once the penetrating and massive Vetiver roots pierced through the compacted gypsum layer it would tap into the underground water supply .**
- **In contrast the corn plant can not do this because:**
 - **its poorer root system.**
 - **Even if its root could reach the underground water supply, corn cannot tolerate the high pH and saline water.**
- **Resulting in very poor growth in the corn crop**