

2014



CERTIFIED ORGANIC VETIVER MADAGASCAR, TOAMASINA

JAVONNERIE  **TROPICALE** *s.a.*
HUILERIE DE MELVILLE

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Debriefing

This report provides background information on Savonnerie Tropicale Huilerie de Melville nursery, plant propagation, river bank protection, “phytoremediation” , slip production methods for a Certificate of Excellence.

Company Background

Savonnerie Tropicale Huilerie de Melville (STHM) is growing the only certified organic palm oil plantation in Mascareignes Island and running a mill to manufacture certified Organic Crude Palm Oil in the East coast of Madagascar.

The plantation 3 000 Ha hold in 180 km of road; 80 km of waterway and 30 km of river bank.

Vetiver *Chrysopogon zizanioides* from South India type (essentially sterile) was introduced in 2004 for soil and moisture conservation, and in particularly for **waterway protection**. Since that STHM really improve the vetiver for many activities such as river bank protection, slopes stabilization, mulching.....

Biography

This ideal plant was introduced in 2004 in plantation by contract with CTHT (Centre Technique Horticole de Tamatave) to reduce erosion, increase soil keep moisture and to stabilize waterway protection.

In 2005, STHM really start working with Vetiver. He is massive fibrous root system could stop spending money on other type of installation using cement, rock.....

In 2007 , we use vetiver on “Ivondro” river bank protection, due to the result of our own experience in waterway stabilization.

Since 2008 a lot of company supply from STHM high quality vetiver; they want to make organic essentials oils, keep moisture on the soil, groundwater recharge, slopes conservations....

STHM briefed his specialist team workers for many years on the correct cropping and trimming procedures and demonstrated sustainable harvesting methods, by removing material without damaging the parent plant. This has been possible made only by instructions and documents.

STHM learned about the existence of TVNI website www.vetiver.org and find a lot of documents about vetiver; we are also glad to have meet a Malagasy company: “La Plantation de Bemasoandro” owned by Yoann Coppin in 2009. That comforts our spirit about vetiver that’s an essential plant to stop erosion.

In 2012 we try to use vetiver as a waste water management for Palm Oil Effluent.

And we use all documents like:

- *Vetiver Network International: "VETIVER SYSTEM APPLICATIONS -TECHNICAL REFERENCE MANUAL" by PAUL TRUONG / TRAN TAN VAN / ELISE PINNERS (2009)*
- *News letter "VETIVER MADAGASCAR N°3 -July 2009" by Plantation de Bemasoandro (Yoann Coppin)*
- *"UNIQUE FEATURES OF VETIVERGRASS (Vetiveria zizanioides L.)" by Paul Truong, The Vetiver Network and DNR&M, Brisbane, Australia*
- *"Vetiver Systems application on National Route 1 in the DR Congo" by Alain Ndona (2008)*
- *"Vetiver Phytoremediation for Heavy Metal Decontamination" by Nualchavee Roongtanakiat (2009)*
- *"Research, Development and Implementation of Vetiver System for Wastewater Treatment: GELITA Australia". Technical Bulletin No. 2003/3. Pacific Rim vetiver Network. Royal Development Projects Board, Bangkok, Thailand. Truong, P. and Smeal (2003)*
- *"Sunshine vetivergrass chrysopogon zizanioides (L.) Roberty" by Robert J. Joy, USDA NRCS Plant Materials Center, Hoolehua, Hawaii*
- *"Poverty Alleviation Using the Vetiver System In Tropical Developing Countries" By John Greenfield Emeritus Senior Agriculturalist World Bank.*
- *« Une solution environnementale «vertes» qui a fait ses preuves Module 1 -6 » WINNER –Haiti mars 2010 by Criss Juliard, The Vetiver Network (International)*

This really helps STHM building a professional and a usual experience in vetiver.

Better than words..... pictures

Palm Oil Mill (POM) Name	Location Address	GPS Reference	
		Longitude	Latitude
SAVONNERIE TROPICALE HUILERIE DE MELVILLE (STHM)	Melville (Commune Fanandrana)	S : 18°14.006'	E: 049°17.542'

Map showing the general location of the plantations in East Madagascar



1° Waterway Protection



80 m waterway protected by vetiver

“Naturally” waterway create by vetiver hedgerows



Vetiver is a very good Waterway protection

Vetiver + endemically tree



Planting Vetiver around a deep waterway in 2008



2003



2005



2008



2014 and still alive!

This plant is awesome! 6 years without any maintenance

2° Ivondro River Bank Protection



Before



During...



Trying to protect river bank by Vetiver



2 200 m Ivondro River bank Stabilized in 2009

3° Nursery Production in direct soil

a) First Nursery 1 200 M2 (2006)

Planting in 2006 and replace in 2008 (For ease of splitting, the plants should not be much older than 24 months of age: STHM experience)



b) Second Nursery 0,5 Ha (2008)



Organic palm oil waste Compost



Labour + Disc



Planting (0,10m x 0,40m)



12 months after

a) Third Nursery in direct soil 0,9Ha (2009)



All nursery supply more than 1 000 000 vetiver since 2006

4° Supply chain Propagation of vetiver



Harvesting



Packing....



...500 stk by cage



Direct to Clients...



... Or delivery

5° Community involvement & extension:



Looking for distance.....



Consultance : Nursery 0,5 Ha

Education: young people to be sensibilized



School visit from Antananarivo 400 km away

6° Slopes Stabilization



15 days after planting



Since 2008 nothing move!



“Tourism” site



Stabilization... takes times



But it's working!

7° Roads



Hedge rows Vetiver on side road



After hurricane "IVAN" in 2008; water erase 25 m of "Ficus benjamina" rows, we replace with Vetiver



2014

If you use it in a proper way Vetiver is helpful, and he contribute to protect your installation....



Dike road 3 years without any maintenance 5 rows



We consolidated this dike road in 2013; see above result 2014



Walk road



8° Environmental Management: Organic Palm Oil Effluent “Phytoremédiation”

“Phytoremédiation” is a technology of using plant to clean up pollutants in the environment.



Palm Oil Effluent



Vetiver Pontoon





Vetiver clump



Actually this experience is a frustration! All pontoon died... We are looking for expertise

9° Research



Leaving in waste water for 4 months... and still alive!



Vetiver clump in water 2 months



Direct planting on top of Decomposed Oil Palm Empty Fruits Bunch

10° Mulching



Mulching Raphia (*Raphia ruffia*)



Mulching Palm seed



mulching.....Porc litter

11° Alternative uses

a) handicrafts



Bundled dry vetiver

b) Esthetic garden

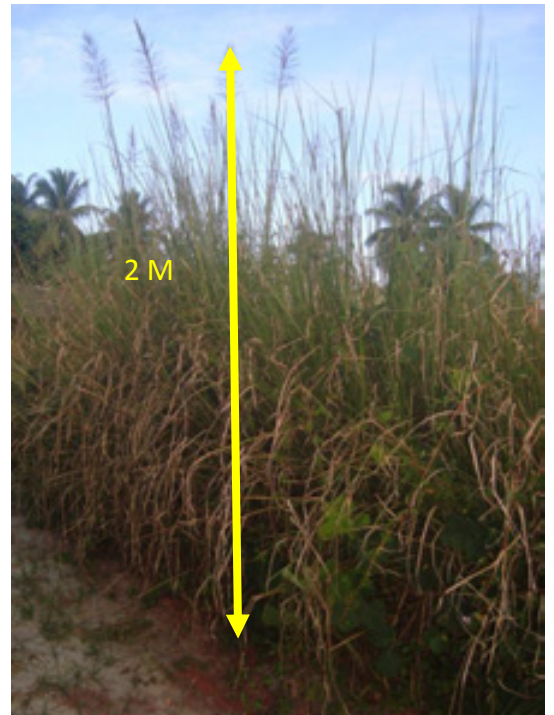


All experiences have been recorded, for many years. And we share our experience with all communities.

We are certified organic since 1994 by ECOCERT and since 2009 by BIOSUISSE. Ours Organic certifications **not allowed pesticides or chemicals products**. And Vetiver is really strong against illness.

We will continue to improve Vetiver plantation inside our property and of course in East Coast of Madagascar.

Contributing to soil protection since 10 years Savonnerie Tropicale Huilerie de Melville wants to be recognized by International Vetiver Network only for spotting, Madagascar as a **vetiver propagation area!**



Mr ETANCELIN Gaëtan (Head of Research and development) showing seed of a 46 months old vetiver plant

