



Report of CIRAD Mission

Sainte Lucia – January 31-February 1st 2012

Claire Amar – CIRAD Martinique

January 31: Arrival envisaged at 10:20 delayed at 12:30

12:40 – 13:30 Discussion with Michel PROM Ambassador and Simon FOURNIER in charge of the cooperation.

13:30 - 19h Visits on fields and meeting

- Station of weaning of the vitroplantslets, Taiwanese Laboratory, Union.
- Producers Thomas PELAGE 3 ha, Edward LOUISY 2 ha, Lucian CHARLES 1,5 ha, La Caye (Center)
- Meeting NFTO and BPMU, Center of packaging, La Caye
- Supermarket `Super I, Rodney Bay

February 1,

- Meeting with the Ministry of Agriculture, Castries, with The Minister of Agriculture, The Permanent Secretary and the Ambassador of France to the OECS Member States.

- Press with 2 journalists of `The Voice'
- Departure envisaged with 14:55 delayed with 18:30

Mr Paul Meynard could not come in Sainte Lucia.

The list of the presents for each of the 3 meetings is united in appendix.

Objectives of the mission:

'To advance the InterReg Project at Sainte Lucia'

- 1. Evaluation of the hybrids in place and plantation? If not new sending of vitroplantlets
- 2. Installation of the evaluation of resistance to the Disease of Black Sigatoka (BS), from new hybrids CIRAD
- 3. Organization of the next mission with visits ripeners areas, port, supermarkets/markets, identification of the quality chain quality
- 4. Exchanges and observations on the evolution of BS in Sainte Lucia
- 5. Information to the new Minister for the Agriculture, assisted of the team of the Embassy of France, in order to present the role of the CIRAD in the Co-operation and the InterReg Project Sustainable Banana in the Caribbean, its projections and results.
- 6. General information to the media Lucians.

Contents of the mission

1. Evaluation of the hybrids in place (possible plantation?)

The seedlings were transferred at the end of June 2011 and thus show a delay of plantation of more than 4 months. For as much, even if little developed, with a manifest delay of growth, the seedlings are in a position to be planted soon (as fast as possible!). The seedlings appear healthy and without symptoms of BS. The seedlings are currently (cf: photograph) in enlargement in greenhouse of the Taiwanese mission at Union. The plantation will take place in February 2012 on the governmental piece (BPMU) at Roseau. The person in charge of the seedlings within the Taiwanese mission is Cyril HENRY. Survived to this 'long' weaning, 174 seedlings '916 ', 132 seedlings '918 ', 156 seedlings '920 ' and 136 seedlings '924 ' (Total 70% of deaths).



2. Installation of the evaluation of resistance to MRN of hybrids CIRAD

A protocol CIRAD of evaluation of resistance to BPMU was given to all the participants of meeting BPMU/NFTO and will be addressed by email for diffusion complementary to Misters Thomas (BPMU) and Leon (NFTO). Mr. Thomas announces that they can increase the number of registered parameters suggested (precise details on productivity, quality, weight of the bunch...). The technicians who will record the data will be identified later, this operation will be directed by Mr. Thomas (BPMU). This operation is very important, because CIRAD need these informations collected in order to evaluate the level of resistance in wetlands, because these hybrids were tested like

resistant in the Indian Ocean, zone much more arid, more unfavourable with the expansion of the disease. This evaluation of resistance will precede an evaluation of the acceptability of the market, for which it remains important to identify the various stages of sale and the chain quality of the fruits.

3. Organization of the next mission, identification of the chain quality and sales outlets

Date is noticed for a forthcoming mission at the end of February at the beginning of March with other researchers of the CIRAD, a specialist post harvest, Christophe Bugaud and a geneticist Fred Salmon. Right now, it is requested from the partners to identify the places of visits in order to prepare the mission. I transmitted to the partners a table in order to supplement it, concerning the number of supermarkets (approximately 7 in the neighbourhoods of Castries), the number of ripening areas, the number of central markets, other sales outlets, percentage of fruits exported towards Barbados and Trinidad (Regional market), identification of customers on the regional market... I have visited the sales outlet of fresh fruits, supermarket 'Super J' at Rodney Bay, with mainly tourist frequentation; the fruits in the stalls present good quality and any spot or bruises. In this sales outlet, the bananas fruits and other green bananas (to be cooked) represent largest volumes compared to the other fruit and vegetables.



4. Exchanges and observations on the evolution of BS in Sainte Lucia

3 plantations, at La Caye, were visited:

- Thomas Pelage, 3 ha, with elevated level of inputs, fungicides treatments + deleafing
- Edward Louisy, 2 ha, treatments fungicides + deleafing
- Lucian Charles, 1,5 ha, treatments fungicides + deleafing (Cf: photograph).



The visited pieces are maintained on a level of production justifying export (the U.K.) the collected fruits. The piece of Thomas Pelage, which is that presents less symptoms of BS. These 3 producers belong to the group of producers (NFTO) who treat in a concerted way. There is no air treatment, it should be noted that the infrastructures exist: airport of private aviation next to airport GFL Charles (Castries), several helicopters with tourist frequentation observed in the Rodney Bay. All the producers, when they treat, apply fungicides with a pulveriser (on their back, 20l). The compartmental banana tree is very parcelled, the intermediate size of the exploitations is located between 1 and 2,5 ha, so a certain difficulty for the air treatments and the pieces are often near than the dwelling.

It seems that there is between 30 and 40% of the growers who adhere to a program concerted treatments, mainly pertaining to NFTO (with forecastings?). The center would be touched more than the south of the island, however less wet in plain than the mountainous area of the south. The fungicidal active matters used usually are the prothioconazole (Banguy), the propiconazole (Tilt), the epoxiconazole-piraclostrobine (Impuls), (Source BPMU).

The visited plantations are very heterogeneous because the seedlings come from other pieces (risk of contamination). The provisioning of vitroplants is not usual. During the visit of the greenhouses of weaning of the Taiwanese Mission, we saw only very few vitroplants compared to the preceding visits. The Banana Industry represents 1200 growers of which currently 350 would be really active. On the territory, between 50% and 70% of the pieces would be touched by the BS (Source BPMU/NFTO), sometimes more in the center of the island, without there existing an exact evaluation of the damage. According the general opinion, the producers miss financial means to fight effectively against the BS.

5. Information to the new ministry for Agriculture

During the official meeting in the presence of the representatives of the Ministry for Agriculture, the presentation CIRAD inform the partners on the current location and the progress report of the InterReg project. The CIRAD is currently partner of this project, whose project superintendent is the UGPBAN. Within the framework of this project, the CIRAD intervenes in Winwards and in Dominican Republic, over one 2 years duration, with 2 main aims:

- Transfer of banana trees resistant to the BS and evaluation of these hybrids
- Prototypes proposals and suggestions of innovating farming crop systems

What about Black Sigatoka in Caribbean Islands?

Dominican Republic

- Detection BS in 1999
- Many trainings CIRAD on the monitoring of the disease, detection in laboratory, at sessions in Guadeloupe and Dominican Republic
- Trials of innovating farming systems, elevated level of fertilization in order to obtain a high rate/rhythm of foliar emission, vegetable barrier installations of with plants not-hosts of the BS (cash crops...)
- More than 9.400 ha touched by BS, production reduction approximately 42% in the areas touched
- Treatments (in the past every 2 months) every 15 to 30 days.

Guadeloupe

- Official detection BS in January 2012 (CIRAD and French MOA)
- Platform of varietal improvement, 1300 potential parents, 1041 crossings realized until 2011.
- Analysis laboratory CIRAD, localisation of the technical trainings

Dominica

- Still unscathed island of BS
- Regular prospections
- Next mission CIRAD envisaged in order to detect or not the BS
- Trainings CIRAD, detection in laboratory, sessions in Guadeloupe in 2010-2011, trainings envisaged : monitoring of the disease, the techniques of forecastings and deleving in 2012 in Dominica, workshop of nematology in Martinique in 2011
- New hybrids CIRAD already transferred (2000 seedlings)

Martinique

- Official detection in September 2010 (CIRAD and French MOA)
- Air treatments with collective organization, treatments with collective organization, but exemption still until May 2012, 12-15 treatments/year
- Trainings techniques of monitoring, forecasting and deleving, concerted practices
- Prototype of terrestrial machine in progress (CEMAGREF)

Sainte Lucia

- Official detection in January 2010 (CIRAD and French MOA)
- 50 to 70% of the banana plantation touched by BS, no air treatment
- Trainings CIRAD detection in laboratory, sessions in Guadeloupe in 2010-2011, trainings envisaged on the monitoring of the disease, the techniques of forecastings and deleving in 2012 in Sainte Lucia
- New already transferred hybrids CIRAD (2000 seedlings) June 2011

Saint Vincent

- Official detection in December 2009
- Trainings CIRAD detection in laboratory, sessions in Guadeloupe in 2010-2011, trainings envisaged on the monitoring of the disease, the techniques of

forecastings and deleaving in 2012 in Saint Vincent, workshop of nematology in Martinique in 2011

- 90% of the banana plantation cut (over 10 cm) October/November 2011
- Air treatments
- New hybrids CIRAD already transferred (2000 seedlings), resistance evaluation
- Supermarkets identified for tests of consumption
- Important production decrease, number of boxes exported divided by 4, are approximately 400 boxes.

CIRAD must regularly explain its activities to the European Cell, based in Guadeloupe and currently has so few results concerning this program InterReg in Sainte Lucia. The CIRAD endeavours to obtain an extension of financings in order to continue the program, but nothing is acquired. Mr. Alexander respectively affirms that the responsibility falls to them of the delay in this program (late administrative documents for the introduction of the vitroplants, delay of plantation and evaluations of the hybrids) and Misters Jean-Baptiste and Emmanuel, Minister and Permanent Secretary (PS) undertakes to make accelerate the operations. Can the fruits of the new hybrids be appropriate on the markets of sale in the Caribbean one? Evaluations of acceptability of market have begun, not yet in Sainte Lucia. The fruits are certainly smaller, are not appropriate on the European markets, but must be tested on the Lucien local market and the regional destinations, like Trinidad and Barbados. The minister requires of the assistance for the publication of documents for the general public, this request will be relayed at the UGPBAN. The IT2 and the CIRAD will organize soon joint missions within the framework of this program of fight against the BS. The minister confirms the 2 project managers: Simon LEON (NFTO) and Gregory APRIL (BPMU). The minister and the P.S. thank the CIRAD and the Embassy for France to be itself moved for this meeting and especially for their current and future collaboration.

3. Discussions with media Lucians.

Other journalists of 'The Star' were invited by the Embassy, but did not present themselves during the Press point. The Embassy will be given the responsibility to inform them later on. The Embassy will publish on its website the information on this mission CIRAD, but also on the InterReg project within the framework of the fight against the BS, in dialogue with the CIRAD. The Embassy plays a big role of facilitator of the operations and for this reason the CIRAD informs it and will inform it of all the actions within the framework of this cooperation program. Mister the Ambassador, assisted of Mr. Fournier, stuck to understanding well the difficulties and the stakes of this serious file of BS.

People met in addition to the 3 united lists of participants:

Antoine BELAIR: Post Hurricane Tomas Emergency Agriculture, supplementary programme EU, Responsible of the project pertaining to FAO, Canada

Bertrand BOUISSIERE: Data processing department, Embassy of France

Florian COUTAL: Trainee Department economic/political, Embassy of France

Cyril HENRY: Person in charge greenhouses Taiwanese Mission in Union

Colin PAUL: Post Hurricane Tomas Emergency Agriculture Program in Sainte Lucia, Agronomist of the project

Herbet ROSERIE: Technician NFTO

Contact :

- Claire Amar in Martinique, claire.amar@cirad.fr

Itinerary (Document NFTO)

CIRAD Visit (Claire Amar and Paul Meynard)

Date: Tuesday January 31st to Wednesday 1st February 2012.

Date	Time	Activity	Location	Agency
31 st January 2012	11.00 Am	Visit Tissue Culture Lab	Union	BPMU/ NFTO
	11.30 am - 12.30 pm	Farm Visit	Bogis, Cobar,	BPMU/ NFTO
	12.3pm – 1.30 pm	Lunch		BPMU/ NFTO
	1.30 pm – 2.30 pm	Field Visit	Roseau, M. Valley	BPMU/ NFTO
	3.00 pm- 4.30 pm	Meeting	La Caye IRDC	BPMU /NFTO
1 st February 2012	Am	Meeting		BPMU/ NFTO/Minister & PS in agriculture.
	1.00 pm	Depart to Airport	GFL Charles	