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## **Trip Report**

Senegal.

5-22 April 2009

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### **IPM CRSP Associate Awards:**

#### **Development and Promotion of Integrated Management of Mango Pests in Senegal**

USAID/Senegal Associate Cooperative Agreement No. 685-A-00-08-00065-00

### **Africa Food Security Initiative**

USAID/EGAT/AG Associate Cooperative Agreement No. EDH-A-00-08-00015-00

LWA# EPP-A-00-04-00016-00

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**Country(s) Visited:** Senegal

**Dates of Travel:** 5-22 April 2009

**Traveler Name and Affiliations:** Larry Vaughan, IPM CRSP Associate Program Director

**Purpose of Trip:** I worked on implementing IPM CRSP associate awards. For the fruit fly project I worked with host country partners to plan field activities and discuss graduate student fruit fly research at the University of Thies. For the food security project, I travelled to the ISRA and WARDA stations at St. Louis to work out protocols for implementing a no-host period to protect tomatoes from viruses and to plan the rice weed research. I accompanied Bob Hedlund, IPM CRSP Agreement Officer Technical Representative (AOTA) to St. Louis and for a day visiting mango orchards in Niayes.

**Sites Visited:** For the fruit fly project I accompanied DPV and ANCAR on two field trip to finalize sites for setting up long-term monitoring stations. One trip was taken to the regions of Ziguinchor and Kolda. A day trip was taken through the Niayes in the region of Thies. For the food security project I went to St. Louis in the north west of the country to visit the ISRA station there.

**Description of Activities/Observations:**

The trip was divided into three portions. Upon arriving we went to the field to Casamance in southern Senegal to meet with government and NGO contacts there regarding the fruit fly associate award. The following week was largely dedicated to the food security project, working with researchers at the *Institut Sénégalais de Recherche Agricole* (ISRA) to test some equipment for the weed research in rice fields and to strategize about the implementation of area-wide virus management of tomatoes. The final portion of the trip was again dedicated to the fruit fly project.

***Casamance Field Trip***

Elhadji Dieng, project implementation coordinator for the *Direction de la Protection de Végétaux* (DPV), and Mour Gueye, technical director of the *Agence Nationale de Conseil Agricole et Rural* (ANCAR) spent five days in the regions of Ziguinchor and in Kolda surveying mango orchards and discussing with ANCAR field agents the choice of fruit fly sampling sites for the long-term monitoring program. We visited with the NGO APRAN, which represents a large group of mango growers in the Niassia zone outside of Ziguinchor as well as discussed the imminent start of long-term monitoring with the regional directors of ANCAR and *Direction Régionale de Développement Rural* (DRDR). In the town of Kolda we met with IPM CRSP graduate student Djibril Badiane who is working on whitefly (not fruit fly) monitoring as part of the IPM CRSP W. Africa Program. In Kolda we also met Saliou Djiba, head of the ISRA research station at Djibelor, near Ziguinchor. He and Djibril are working on assaying new rice varieties for pests as part of the AFSI project.

### ***St. Louis Field Trip***

ISRA is the sole Senegalese partner in the AFSI associate award, and ISRA/St. Louis is the principal facility. The re were two objectives for the trip: 1) train the weed scientist Souleymane Diallo on use of a laser level to measure levelness in rice fields; 2) decide where and how to implement a host-free period for area-wide management of tomato viruses in this important tomato production area. Moussa Noussourou, a researcher and IPM CRSP PhD from the Institut d'Economie Rurale (IER) in Mali was brought by the project to provide guidance in adopting and adapting this technique from Mali. (This report also serves as a trip report for his trip to St. Louis.) Bob Hedlund, the IPM CRSP Agreement Officer Technical Representative (AOTA) accompanied me on a trip to visit the ISRA station in St. Louis.

ISRA kindly provided a vehicle and driver for Bob, Moussa, Samba Diao (ISRA tomato expert), and myself to go to St. Louis. En route we stopped briefly at Pout, south of Thies, which is the principal mango retail outlet. Women line the road for about a kilometer selling mangoes. I discussed the fruit fly problem with a French-speaking woman and said we would come back later in the week to discuss the fruit fly problem there. Our intention is to do a baseline survey to better understand how the fruit fly affects retailers and how it can be managed.

Upon arriving in St. Louis, we met Maiga Cisse the station director, Souleymane Diallo the weed scientist, and Moustapha Dieye the soil scientist. Over the next several days Moussa worked with Souleymane and Samba to decide the optimal site for testing the no-host period along the Senegal River Valley. I gave an afternoon training on the use of a laser level for taking precise measurements of field elevation. We will use this information to correlate weediness in rice fields with unevenness of the terrain. Weeds and birds were determined to be the most serious rice pest problems in the area.

### ***Visit to University of Thies***

In the middle of this excursion to St. Louis, Bob and I went to the University of Thies (formerly the Ecole Nationale Supérieure d'Agriculture (ENSA)). Ousmane Ndiaye was presenting his masters degree (DEA) defense on mango fruit fly host range. This work was partially supported by CIRAD and the USAID economic growth project, SAGIC. His subsequent PhD work is being supported by the fruit fly associate award. After his successful defense we had a meeting with Saliou Ndiaye, his major professor, Papa Diedhiou, the academic director, Assa Balayara, the other project-supported graduate student, and the new information technology coordinator, Marie Dieng. Jean-Yves Rey, a CIRAD mango expert working in Thies also met with us briefly. Kemo Badji, the national coordinator of the project joined us with Elhadji Dieng. We discussed the fruit fly population database development, agent training, and began a discussion on refining the PhD research plans of Assa and Ousmane.

Completion of St. Louis AFSI work.

Upon returning to St. Louis in the evening we had a morning meeting with the ISRA staff and Moussa to get a summary of results from their prior day's excursion to the field to

discuss with farmers and choose a site for the no-host work. Based on geography and farmer disposition the village of Thiago was chosen for testing the no-host period in 2009. It is an area where tomato production had been abandoned because of tomato virus and is isolated from other tomato-producing areas by about 15km on the upstream and downstream side of the river. We also made a courtesy visit to the St. Louis station of the Africa Rice Center (WARDA) where we met Director Bado, Matty Dermot the rice economist, and Tim Krupnik a U.S. graduate student studying rice production systems. The AFSI work in Senegal is focused on facilitating collaboration between ISRA/St. Louis and the St. Louis WARDA station. In the evening we met with M. Diop of the *Comité de Tomate*, which represents the growers, input suppliers and processors of tomatoes in the valley. We explained the no-host activity in Thiago as planned and discussed possible expansion if successful.

#### ***Day trip to Niayes***

Moussa returned to Mali. His contribution to the expansion of the no-host period in Senegal was well appreciated by me and our ISRA colleagues and represents an important step in the transfer of a successful IPM CRSP from Mali to Senegal.. Bob Hedlund accompanied Kemo and Elhadji of DPV and Mour Gueye from ANCAR on a day trip to scout fruit fly monitoring sites in the commercially important mango production zone of Niayes. We visited orchards in Taiba Ndiaye and Darou Khoudoss. Darou Khoudoss has a well-organized grower group with whom the project has already established relationship via the SAGIC project. Upon return to Thies we attempted to re-establish contact with female mango retailers in Pout, but our contact was absent. Arriving in Thies we met with the team at the University of Thies. The principal topic

#### ***Fruit fly meeting at ENSA***

After the weekend Kemo, Elhadji, and I returned to Thies for a meeting with the team at the University of Thies. (Bob began a review of a Purdue project on natural plant products.) Due to my late arrival from Dakar, Saliou Ndiaye could not attend. Participants were Assa Balayara, Papa Diedhiou, Marie Dieng, Jean-Yves Rey .We discussed a narrowing of topics for Assa and Ousmane's graduate research, as well as management of the monitoring database. We concluded that a supplementary training of ANCAR agents was necessary for a good start of the long-term fruit fly monitoring system. The urgency of starting monitoring meant that the training had to be done within three weeks. The university took leadership in hosting the training.

#### ***DPV director***

I had the opportunity to have a brief meeting with the *directrice* of DPV, Marietou Diawara, who was appointed director in August 2008. This was our first meeting. We discussed the objectives of the project and priority tasks, as well as potential for future collaboration.

#### ***USAID***

I had a meeting with the Economic Growth staff – Peter Trenchard, and Aminata Badiane (fruit fly project Cognizant Technical Officer (CTO)) and the Mission Director, Kevin Mulally. This was a joint meeting with the natural products project evaluation team,

including Bob Hedlund). We had a wide ranging conversation about natural products, the mango fruit fly problem and possible Mission interest in work on tomatoes and onions in the future.

**USDA**

I met with Robert Hanson, USDA agriculture attaché (Foreign Agriculture Service), Linda Logan, the new USDA/APHIS officer for Senegal and the sub-region, and Raphael Coly of USDA/APHIS. We discussed mango phytosanitary issues and the offices increasing interest in the mango fruit fly issue. They said they supported the possibility of getting some USDA fruit fly experts to visit the fruit fly project. Robert gave me the contact in Washington to start the process.

**SAGIC**

I visited Patrick Nugawela who coordinates the agriculture part of USAID/Senegal’s economic growth project. We discussed ongoing process and cooperation. He introduced me to Dick Cook who will be taking over part of these responsibilities as the SAGIC project expands. I met Mamadou Dabo and discussed the necessity of our project foregoing some of the publication development we planned to do together so that I could concentrate on the implementation of the long-term monitoring program.

**List of Contacts Made:**

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