

IPM CRSP Trip Report

Countries Visited: Senegal, Mali

Dates of Travel: 22 May – 9 June 2010

Travelers Names and Affiliations: Larry Vaughan, Associate Program Director

Purpose of Trip: workplan meeting for W. Africa regional program, AFSI food security associate award meetings with institutions with individuals, field trial implementation for USAID/Senegal mango IPM associate award

Sites Visited: Mali: Bamako

Senegal: Dakar, Thies, Ziguinchor, and several sites in Basse Casamance

Description of Activities/Observations:

Senegal: I arrived at 4:15am Sunday 23 May and was picked up by a DPV vehicle. I delivered two sacks containing thousands of cellulose acetate filters donated by the Celanese Corporation for use as pheromone carriers in fruit fly traps. I met with Kemo Badji, national coordinator of the fruit fly project and discussed current issues involving partner relationships, graduate training, long-term population monitoring, and the large-scale efficacy tests. I flew to Bamako in the late afternoon. Don Mullins (program leader and entomologist), Doug Pfeiffer (entomologist), Jim Westwood (weed scientist), Carlyle Brewster (entomologist) and Darrell Bosch (economist) (all of Virginia Tech) arrived later.

On Monday and Tuesday before the regional workplan workshop, I went to IER Sotuba to meet with Dr. Kadidiatou Gamby, head of the fruit and vegetable lab, and coordinator for all IPM CRSP activities at IER. Yacouba Doumbia, head of IER's rice program at IER/Sikasso joined us for a productive discussion about the certified rice seed work planned for the upcoming season in the villages of Niena and M'Pegnesso. We also discussed the difficulty in getting the needed soil testing done at IER/Sotuba in order to make good fertility recommendations to the women's groups we targeted. Poor soil fertility is a large constraint that we have observed during field visits, and the reason we added soil fertility to the seed production package of the food security associate award. Yields of both traditional and improved varieties are low (3MT/ha, 4-5MT/ha, respectively) in Sikasso.

Penda Cissoko, an (economist), and Aissata Thera Traore (plant pathologist) and Darrell Bosch joined in a detailed discussion of the technical aspects surrounding the feasibility of a potato seed supply chain. A feasibility study will be an output of the new Mali IPM associate award. Also joining the meeting were Sidibe Katile (plant pathologist) Alioune Diarra (vegetable agronomist), Daouda Dembele (weed scientist), Abdoulaye Camara (plant pathologist), Jim Westwood, Doug Pfeiffer, Don Mullins, and Carlyle Brewster. Daouda and Jim discussed week work planned as part of the W. Africa program. Madame Gamby clearly outlined the scope of the proposed collaboration between IPM CRSP, the IICEM economic growth project, and Peace Corps/Mali. The need for a list of pesticides that may need to be used in any of our CRSP projects was emphasized by me and Madame Gamby, so that a PERSUAP can be prepared. It was explained that no pesticides can be used in IPM CRSP activities without prior authorization

by USAID via a PERSUAP. Bob Gilbertson (plant pathologist UC Davis), George Mbata (entomologist Ft. Valley State), and Pat Hipkins (pesticide programs, VT) arrived.

On Tuesday 25 May, a group met again at IER (Gamby, Sissoko, Kalile, Diarra, Gilbertson, Bosch, Mullins, Vaughan). Among topics were economic aspects of a seed potato supply chain, the financial management workshop that will be held in June for regional partners. Testing best practice versus farmer practice for planting potato seed pieces was also discussed. The components of such an experiment would be cut versus uncut, regular knife cleaning versus no knife cleaning, post-cut scarification period versus immediate planting. Bacterial wilt and other rots are the pathogen of concern for cut seed pieces. Madame Gamby and I met to work on developing a Mali/IPM associate award budget for IER and to discuss long- and short-term training needs at IER that could be supported by the associate award. Blister beetle work in Sirakoroloa and Niayes was discussed only briefly because Sidiki Traore, who will implement the work, had not yet returned from his short-term training in the United States. Don Mullins discussed the efforts to equip the biotech facility at IER.

On Wednesday and Thursday Don Mullins led a workshop of representatives from the partners in Ghana, Senegal, and Mali to develop the new W. Africa program's workplan. Only ANCAR of Senegal failed to name a representative. I had side conversations with collaborators who were present for the regional program dealing with the new Mali IPM associate award and the food security associate award. At lunch on the first day we convened a meeting during lunch for the Mali/Senegal potato team (George Mbata, Emile Coly (ISRA), and Aissata Traore).

Friday morning 28 May I discussed pesticide residue research opportunities of CERES Locustox with Baba Gadji, the head of the residue laboratory. The original plan for the days following the workplan meeting was for an IER and VT team to carry out a pest assessment in the Bandiagara area of Dogon country in collaboration with the IICEM project as per the IPM Mali workplan. Before arriving in Mali we learned that the onion harvest had already been completed, so I decided to delay the trip until a more favorable season. In consideration of the free time made available by this change, Issa Sidibe (Development research chief at OHVN) and I decided to meet the Director General of the Office du Niger in Segou. However, a ministerial delegation visit planned for Friday made that trip impossible. The DG offered to meet the following Monday, but my early departure for Senegal had already been arranged. ON will be a new partner of the IPM CRSP, so an orientation meeting is important. Issa had a prior meeting with the DG, which greatly facilitated understanding of the proposed activities of the Mali IPM associate award and the possible roles that ON can play in it. Instead of going to Segou, Issa and I met for about four hours five hours to work on budget, invoicing, and supplies issues for the IPM/Mali associate award.

On Friday and Saturday 29 and 30 May, I met with U.S. and host country collaborators including Moussa Noussourou (IER), and Issoufou Kollo (UC Davis).

Other contacts during my stay in Senegal were I had brief meetings with Ram Shetty of the West African Seed Alliance (WASA) and Paul Senghor of the African Seed Trade Association (ASTA), which is supported by WASA. WASA and ASTA will be invited to the sidebar meeting on rice seed production that IPM CRSP will hold during in June with IICEM and Peace Corps

during the USAID/Mali partners meeting. During my previous trip to Mali I visited Mali Protection de Cultures, a seed and pesticide company in Quinzambougou near the hotel. The Manager, Jacques Hommes, was interested in my suggestion that he consider importing some of the tomato varieties that we had demonstrated to be successful as part of the virus management package. I promised I would put him in contact with Bob Gilbertson, who has contacts with the relevant U.S. seed dealers. I arranged a meeting for Sunday, although I could not attend because of my departure. Attending were Mr. Hommes, Bob Gilbertson, Moussa Noussourou, and Don Mullins.

Sunday May 30. Depart for Dakar, arriving in Senegal at about 1600h.

Monday 31 May (Memorial Day) – complete rebudget and no-cost extension request for the mango IPM fruit fly associate award and submit it to the financial team at OIRED for review and comment.

Tuesday 1 June. Meeting with the Alioune Fall, Scientific Director of ISRA, Demba Farba Mbaye, coordinator of the food security associate award, and Emile Coly, Director of ISRA's horticultural research center (CDH). We discussed the planned potato research in the W. Africa program, which will focus on the potato tuber moth and be carried out by Emile Coly in collaboration with George Mbata at Fort Valley State. We discussed the need for prompt action on obtaining rice seed of the varieties registered in 2009 to test their performance in Casamance (Kolda and Djibelor) in terms of tolerance to the pest cohort facing bas-fond rice in the region. (Testing and registration of varieties takes place at ISRA's research station along the Senegal River in the north, so we decided to do testing in the south to understand performance in the very different growing conditions of Casamance.). We discussed the need to get a land leveler repaired for ISRA's experimental leveling of the rice fields, something that needs to happen soon before the rainy season makes it impossible. I announce the financial workshop, which I had discussed with Demba in March. I thanked Demba in front of the DS for the improved coordination of the food security associate activities in response to our discussions in March and praised the new accountant, Abdoulaye Ba, whom Demba brought in to manage the billing, which had posed the chief constraint and ultimately it was a brake on resource access in 2009. I received comments from the home office for regarding the no-cost extension request and began revisions. At 1500h I had a debriefing meeting with Aminata Badiane, AOTR of the mango fruit fly associate award. I discussed VT's preparation for the no-cost extension and received information on the status of the supplies purchased by the USDA phytosanitary project for our use in the area-wide field trials being conducted through the associate award.

Wednesday 2 June. I had a meeting with Cheikh Tidiane Ba, head of the *Departement de Biologie Animale* at the University of Dakar concerning problems with the enrollment process, and professorial guidance that has left our two doctoral students supported by the mango fruit fly project in limbo. We also discussed the intention to establish a budget in the department to support the students' research and perhaps support research on fruit fly by existing students.

Thursday 3 June. On a day trip to Thies, I met with personnel on the fruit fly project from ENSA.

- Saliou Ndiaye, implementing professor
- Papa Madiallacke Diedhiou, ENSA academic coordinator, and phytopathologist member of the IPM CRSP IPDN
- Marie Dieng, IT specialist managing fruit fly population database
- Assa Balayara, former graduate student at ENSA, current doctoral student at the University of Dakar, and researcher on the fruit fly project.
- Ahmed Tidjane Diallo, Director of ENSA

We discussed the re-budget and no-cost extension, including the substantial sum of unspent funds that will be removed from the ENSA budget. Some of these funds will either be transferred to the University of Dakar or used by VT to support short-term training of graduate students while the problem with the University of Dakar is being resolved. Papa, Saliou, and I had a long discussion with the new director regarding the need to effectively spend the remaining budget. The obvious needs are to improve the fruit fly culture and laboratory. I explained that the highest priority is to ensure prompt payment of the IT specialist's salary, ensure support of materials for the graduate students, including Assa, whose research will be carried out at ENSA even though she is currently a doctoral student enrolled at the University of Dakar. Some of the priority purchases that need to be made by ENSA are plastic trash cans and tarps for the Bineta Dieye's DEA research on fruit fly management among women retailers, and purchase of a paper pastry bags for use in fruit bagging research that will be carried out by Elhadji Dieng, DEA student and agent of DPV. I also specified that two laptop computers should be purchased for the use of Bineta and Assa during their research and that original software should be purchased. We discussed alternative plans for long-term training of Assa Balayara and Ousmane Diaye their current enrollment situation cannot be The lack of regular invoicing has caused spending constraints and adversely impacted research. For example, I discovered that one of the distant trap line for Bineta's research on fly movement between orchards and retail areas had not been completed because of a lack of funds to go to the field. This happened despite a substantial budget on paper. I also explained that I would not request an increase in the advance VT has put at the disposal of ENSA (\$6000) until it has a record of efficient, regular invoicing. I encouraged the director to find someone to manage the IPM CRSP billing and have this task as a priority. We agreed to support an accountant within the current limits of ENSA's budget and that ENSA would send this person to the IPM CRSP financial management workshop in Bamako in June.

Friday 4 June. I flew to Ziguinchor on Senegal Air flight 501 to do work unrelated to the fruit fly project. No charges were made to the IPM CRSP. In the evening I joined Kemo Badji, national coordinator of the mango fruit fly project (DPV) and Lamine Senghor, DPV plant pathologist, who are on a field trip to set up the fruit fly field trials with ANCAR agents.

Saturday 5 June. The DPV vehicle broke down Friday evening and was not available on Saturday. ANCAR provided a vehicle with which we went to Oussouye west of Ziguinchor to visit Ousmane Ndiaye, the second doctoral student supported by the fruit fly project, and agent at the Oussouye National Park as an agent of the *Direction de Parcs Nationaux*. The Regional Director of ANCAR, Mamadou Dione travelled with us to the region. Cooperation at the regional level of ANCAR has been extremely good. The extra effort made by a regional director to come to the field on a Saturday afternoon and offer his vehicle for project work is an example.

The regional level of ANCAR in Ziguinchor, Kolda, and Thies have a keen understanding of the seriousness of the fruit fly problem among the local producers.

Sunday 6 June. Kemo Badji and I worked on details the protocol efficacy trial protocol. Regional Director Mamadou Dione joined us in the afternoon. He discussed the long-term training needs of his team, both in general and with respect to mangoes. He explained the need for having a specialist technician in several areas including a specialist for the region in pest management with emphasis on mango. We solicited his opinion on the agents' responsibilities in the efficacy protocol to ensure that the level of effort required by the ANCAR extension agents is not too much. While Kemo and I worked on the efficacy protocol, Lamine Senghor, DPV's plant pathologist took the DPV vehicle to Goudomp to look for a *Fusarium* sp. that he had previously found further east in the Casamance. The fungal infection makes mango inflorescences sterile, causes elongation of the flower bearing stem, and sometimes causes foliage to leaf out from the tip of the bare inflorescence stalk. He found infections in four villages: Goudomp, Kaour, Birkama, and Simbanding Balante. In Simbanding Balante the infection was less common and infected trees showed less severe symptoms than the other places. This disease needs attention. It has potential to be a worse pest than fruit fly because no fruit is produced on infected inflorescences.

Monday 7 June. Non-project work, no charges to IPM CRSP

Tuesday 8 June. I returned to Dakar on Senegal Air flight 202. I had a morning afternoon meeting with Baba Sene, the videographer who is preparing the fruit fly video. I reviewed the draft production. In the afternoon I had a meeting in the *Department de Biologie Animale* at the University of Dakar to once again address the enrollment and guidance issues that have prevented our four supported graduate students (two students from the fruit fly project and two from the W African program) from being fully enrolled.

Wednesday 9 June. Return to the United States

Organization Abbreviations:

AFSTA African Seed Trade Association. Bamako Mali

ANCAR. *Agence Nationale de Conseil Agricole et Rural*. Senegal

APRAN. *Association pour la Promotion Rurale de l'Arrondissement de Nyassia*. Ziguinchor, Senegal

CDH. *Centre de Développement pour l'Horticulture (ISRA)*. Dakar, Senegal

CRI. Crop Research Organization (CRI) Horticulture Division. Kumasi, Ghana

DPV. *Direction de la Protection Végétaux*, Senegal.

CERES *Fondation Centre de recherches en écotoxicologie et sécurité environnementale*. Dakar,

ENSA. *Ecole Nationale Supérieure d'Agriculture*. University of Thies, Senegal

IICEM Initiatives Intégrées pour la Croissance Economique au Mali

IER. *Institut d'Economie Rurale*, Mali
Senegal

ISRA. *Institut Sénégalais des Recherches Agricoles*. Dakar, Senegal

LTCQE. *Laboratoire de Toxicologie et du Contrôle de Qualité Environnementale*. Bamako, Mali

OHVN, *Office du Haute Vallée du Niger*. Bamako, Mali

UCAD. *Université Cheikh Anta Diop* de Dakar. Senegal
VT. Virginia Tech. Blacksburg, Virginia USA
WASA. West African Seed Alliance. Bamako, Mali

List of Contacts:

Name	Organization
Cheikh Tidiane Ba	UCAD
Kemo Badji	DPV
Assa Balayara	fruit fly project
Raphael Biagui	ANCAR/Ziguinchor
Darrell Bosch	VT
Carlyle Brewster	VT
Emile Coly	ISRA/CDH
Safiatou Dem	LTCQE
Daouda Dembele	IER/Sotuba
Yacouba Dembele	IER/Sikasso
Ahmed Tidjane Diallo	ENSA
Alioune Diarra	IER Sotuba
Henry Diatta	ANCAR/Ziguinchor
Sihouké Diatta	ANCAR/Ziguinchor
Samba Diaw	ISRA/CDH
Papa Madiallacke Diedhiou	ENSA
Marie Dieng	ENSA
Mamadou Dione	ANCAR/Ziguinchor
Alioune Fall	ISRA
Baba Gadji	CERES-Locustox
Kadidiatou Gamby	Chief, Fruit and Vegetable Lab, IER/Sotuba
Pat Hipkins	VT
Sidibe Katile	IER Sikasso
Demba Keita	APRAN
Issoufou Kollo	UC Davis
Djiguiba Kouyate	IICEM
George Mbata	Fort Valley State University
Demba Farba Mbaye	ISRA
Don Mullins	VT
Ousmane Ndiaye	Direction de Parcs Nationaux
Saliou Ndiaye	ENSA
Moussa Noussourou	IER/Sotuba
Michael Osei	CRI
Doug Pfeiffer	VT
Lamine Senghor	DPV
Issa Sidibe	OHVN
Baba Sene	<i>Direction des Eaux et Forêts</i>
Penda Sissoko	IER/Sotuba
Samba Soumare	IER/Sotuba
Aissata Traore Thera	IICEM, IER/Sotuba
Halimatou Traore	LTCQE
Jim Westwood	VT