



**USAID**  
FROM THE AMERICAN PEOPLE



**Virginia Tech**

---

## **Trip Report**

Senegal, Mali

6 – 21 December 2010

---

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

#### **Mali: Building Local Capacity in IPM Solutions**

USAID/Mali Associate Cooperative Agreement No. 688-A-00-10-00015-00

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

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

#### **IPM CRSP Africa Food Security Initiative (IPM CRSP AFSI)**

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

Prepared by Larry Vaughan

Office of International Research, Education, and Development (OIRE)

International Affairs Offices

526 Prices Fork Road (0378)

Virginia Tech

Blacksburg, VA 24061 USA



**Countries Visited:** Senegal, Mali

**Travel Dates:** December 7-21, 2010

**Traveler's Name and Affiliation:** Larry Vaughan, IPM CRSP Associate Program Director

**Purpose of Trip:**

Food Security Associate award – Status check on field activities being carried out on tomato virus management and rice production in Senegal and Mali. Formalize assignment of new project coordinator at ISRA/Senegal

Mali IPM – establish relations with Office du Niger

Mango IPM – prioritize activities during no-cost extension period.

**Sites Visited:** Senegal – Dakar, St. Louis, Thies. Mali – Bamako, Ségou, Sikasso

**Description of Activities/Observations:**

***Tuesday December 7*** – Arrived in Dakar

Early morning correspondence. Late morning visit office of CBAER.

1600h meeting with Aminata Badiane and Papa Dieye. Brief meeting with Kemo Badji who arrived after the meeting with USAID.

***Wednesday 8 December***

ISRA/CDH

AFSI coordination meeting with Demba Farba Mbaye and Emile Coly. Passed coordination of ISRA activities to Emile. I learned that an invoice had been sent the end of August that had not been paid. Work had stopped awaiting reimbursement. The tomato season had already begun, so it was now too late to start organizing a no-host zone this season. I met Papa Kane, who had been made the point person on mites at ISRA after the training provided by Beverly Gerdeman in August 2009. Dienaba Sall is an entomologist who is working on cabbage. Therefore, we need Doug Pfeiffer to make contact with her for the cabbage IPM work in Senegal. She was not at ISRA/CDH that day.

In the afternoon I went to DPV to meet with Kemo Badji to discuss essential short-term tasks to advance the mango fruit fly project in the event of either its definitive ending in March 2011 or the beginning of a second phase. By coincidence Simen Ndene of ANCAR dropped by Kemo's office to get a reference. We talked briefly. A Friday meeting had just been coordinated with Mour Gueye of ANCAR for Friday afternoon in Thies according to his preference. Being in Thies, Simon would not be able to attend the meeting.

### ***Thursday 9 December***

To ISRA/St.Louis with Samba Diaw. Upon arriving in the afternoon we met with Aminata Ba Sow, the station sociologist. We designed an action plan for accomplishing useful tasks despite the failure of the project to establish a no-host management zone in the valley this year. Socioeconomic and biophysical data will be collected among which is the incidence of virus symptoms at peak harvest the end of March, the content of virus in whiteflies in several prospective no-host zones, and the surveying of growers using a modified version of the instrument recently used in the Mali IPM associate award. We decided on one or two workdays in early January to adapt the questionnaires and settle on a sampling strategy, ideally with the help of Keith Moore, who worked with Malian counterparts to develop the tomato survey.

### ***Friday 10 December***

#### Gaston Berger University

Before leaving St. Louis we stopped at Gaston Berger University where Samba and I met Mateugue Diack, who has been responsible for the recent expansion of agriculture programs at the university. We also met Papa Diedhiou, a recent faculty recruit to UGB, formerly at ENSA. Papa is a key resource of Sally Miller's global theme on disease diagnostics. Papa and Mateugue agreed that it would be possible to send some students to work with ISRA as interns on ISRA's upcoming tasks on the food security project.

#### ENSA

I was dropped off in Thies where Kemo Badji came from Dakar to meet me. We planned a meeting at ENSA on the mango IPM associate award with emphasis on ENSA, but with the expected participation of Mour Gueye from ANCAR who coordinates ANCAR's efforts. In addition to Kemo and me, present were Saliou Ndiaye, Marie Dieng, and Assa Balayara. Mour Gueye did not show up. We talked about planning to end the project by 31 March if we do not receive a new phase. This included ending Marie Dieng's IT database position and Assa's graduate program. We covered the need for ENSA to continue invoicing and to plan ahead to insure that it does not run out of money to pay Marie's salary. I suggested holding two months of salary in reserve and starting the next invoice well before then.

### ***Saturday 11 December .***

Morning flight to Bamako. Work in room.

### ***Sunday 12 December***

Departure at 1400h with Issa Sidibe, *Chef de recherche d'accompagnement* of OHVN to Ségou to meet with the administration of the Office du Niger. The objective was to establish an understanding by ON of the Mali IPM associate award and proceed to discuss the steps in establishing a subaward with budget. Tasks for the current year were to be discussed as well to ensure conformity with Y2 outputs.

## ***Monday 13 December***

### Office du Niger

Morning meeting with the *Président directeur général adjoint* (PDGA) Coulibaly of the *Office du Niger*. We were joined by Boubacar Touré, the *Chef de service vulgarisation et formation*; Mr. Goro, *Charge de mission de la direction générale*, and Mr. Lan, also a *Charge de mission de la direction générale*. Later in the meeting Hamadoun Sidibé, *Chef de planification et statistiques* joined. The object of the meeting was to come to a mutual agreement on establishing a partnership with ON with funds from the Mali IPM associate award. Issa explained the long partnership between Virginia Tech and OHVN. I explained the objectives of the associate award and the specific activities in which ON would be involved. The major activities revolve around establishing a pesticide safety training program for growers (which they do not have) and testing the area-wide no-host period for tomato virus management.

Women dominate in vegetable production except potato where men dominate. (This is likely because of the large investment in seed that is required.) Sixty percent of horticultural production is tomato according to the ON team who met us. Niono within ON contains most of the 600ha of tomato production, so Niono will likely be the site. Virus is a recognized problem, but they said there may be others worthy of attention. ON has no statistics on the severity or distribution of tomato virus. Therefore, we need to carry out this task before the tomato harvest. They were very interested in the transformation of tomato to increase demand and reduce price swings which go as high as 1000CFA/kg in June or July, but be as low as 25CFA/kg during peak production in March/April. ON noted that the varieties currently grown are not the varieties used for canning, particularly with respect to color. (This is not unexpected because there is no demand for canning tomatoes). The group also expressed interested in rainy season production which would extend the season into the more profitable period. Second in importance among vegetables is shallots. Vegetable seed production was also mentioned as an underexploited opportunity.

The PDGA said that ON is accustomed to setting up dedicated project accounts. It will do so and request an advance from Virginia Tech to use as working capital.

In late morning we left ON because they had a meeting scheduled. We visited the NGO ADEV. The president is Omar Diallo. The coordinator is Ismael Diallo. According to the president, it is the coordinator who does most of the work running the organization. ADEV recently approached Issa Sidibé to get fifteen of its staff trained as pesticide safety trainers, including four women. Since then, ADEV has trained nearly 200 producers have been trained ADEV's four areas of intervention – Ségou (2 sites), Niono (2 sites), and Baraoueli (1 site). I was told that ON growers of potato use 700kg of fertilizer/ha. ON potato production is dominated by men.

We returned to ON in the afternoon as the PDGA requested to meet with Boubacar Touré, the *Chef de service vulgarisation et formation*, whom we had met during the morning meeting. Issa, Boubacar, and I outlined the activities under which ON's work will be organized. These are establishment of a pesticide safety training program for growers and testing are-wide management of tomato virus using the no-host period technique. Related

to the pesticide safety training, we discussed the steps by which trainers will be trained at ToTs conducted by OHVN in the OHVN zone, and then these newly formed ON agents will begin their own grower training with the participation of OHVN trainers. As the vendor training is developed as a pilot training by OHVN and OPV, ON will participate. We left with an agreement that : 1) I would request the naming of a point person at ON for the project; 2) Boubacar would prepare a summary of the areas of intervention. In my notes these are:

1. implement a pesticide safety program with the emphasis on growers for the first year.
2. prepare growers in pilot zones for testing the no-host period to manage tomato viruses
3. Support the work of IER in the ON zone with respect to surveying pest problems in tomato, cabbage, and potato.
4. contribute personnel effort in a formal evaluation of the extent of tomato virus in the ON, with an emphasis on the most important areas of production
5. Work with OHVN and IER to explore the possibilities of rainy season tomato production as is done in Kati (OHVN zone)
6. Collaborate with NGO's in their zone that are doing work that corresponds to project objectives, in particular pesticide safety training and tomato virus management.

Issa and I left Ségou at 1500h to return to Bamako.

### ***Tuesday 14 December***

#### ***Office da la Haute Vallée du Niger (OHVN)***

I went to OHVN so that Issa and I could visit Issa Djiré, Directeur General of OHVN. We reviewed the long collaboration between OHVN and Virginia Tech and I expressed gratitude for OHVN's role in the Mali IPM associate award, which is serving as lead institution transferring its expertise in extending pesticide safety training and area-wide tomato virus management with the new project partners ON and OPV. We then met with Issa's project accountant, Safoura Mariko, and OHVN's head accountant Bourema Outtara. I responded to questions Bourema had with respect to allowing certain charges and the manner of providing backup. I asked Safoura to make a priority of sending a pdf of numbered the receipts for the last invoice submitted by OHVN so that OIRED can continue with payment.

#### ***OPV***

Issa and I proceeded to the *Office de Protection Végétaux* (OPV) to work with Abdoulaye Sissoko in completing OPV's budget submission (my priority) and detailing the near-term calendar for starting the training of OPV agents with OHVN.

OPV has a single pesticide safety module that was part of a farmer field school project. The module originated from the agrochemical company Cigogne. Abdoulaye and I worked on adapting the budget line items according to comments that had been sent by Virginia Tech in September. We completed a new draft of the budget and sketched the changes

required to the budget narrative. Abdoulaye agreed to develop the budget notes in French and send them to me for translation.

Abdoulaye, Issa, and I agreed that OPV will be the best place to start the pilot training for small pesticide vendors. Many pesticide vendors are arranged along the road next to OPV, so it should be easy to attract them for short periods over a week or two. By taking this approach we will be able to training that is not superficial, yet avoid the need for vendors to close shop for a full day.

We paid a courtesy visit to the new OPV director Bakaye Thierno before Issa departed. I worked a while longer on the budget with Abdoulaye then took a taxi to IER/Sotuba.

At IER Sotuba I met Kadidiatou Gamby, head of the Fruit and Vegetable Laboratory. We reviewed the objectives of my trip as far as concern IER and the three IPM CRSP projects in which it is a partner – IPM CRSP W. Africa regional program, IPM CRSP AFSI food security associate award, and the Mali IPM associate award. Chief among our immediate shared tasks was completion of a signature sheet for IER's W. Africa regional program budget and obtaining the correct set of receipts for an invoice on the W. African regional program. We visited the vegetable nurseries which included 75 varieties of tomatoes she recently acquired in France, as well as a new variety of potato from Ukraine. Before leaving Sotuba, Sidiki Traoré presented a summary of the blister beetle millet pest work he carried out – an activity of IPM CRSP AFSI. I encouraged him to make a backup of the paper data, enter the data in Excel, and save copies in a physical location different from his computer, specifically to send copies of experimental data to Carlyle Brewster and myself. Once the data is securely saved by these several ways, he is to write up the protocols, which had not already been written.

### ***Wednesday 15 December***

I spent the day at IER Sotuba reviewing data with IER colleagues. My first morning meeting was with Aminata Doucouré, a sociologist leading the gender baseline study for the Mali IPM Associate award. By the time we met, the survey instrument had been completed in four regions: Mopti (Bandiagara); Sikasso (six villages including Niena, but not M'Pegnesso; Koulikoro (three or four villages); and Ségou (not yet received). From five to fifteen each of men and women per village were interviewed. The large amount of data require assistance to enter, so I suggested to her and Madame Gamby that she receive some help, to which Madame Gamby agreed. Aminata and I agreed that she should enter all of the first ten questionnaires herself and pass the spreadsheets to Maria Elisa Christie and myself. We would review the format of data entry together with an eye towards portability for analysis. She agreed to write the protocol (sampling design and interview procedures) and send it as well.

I then met with Penda Sissoko, the economist working with Darrell Bosch and me on the seed potato feasibility study. She prepared a questionnaire with the intention of covering potato growers in Ségou, Sikasso, Koulikoro, and Mopti or Gao with the objective of understanding the zones of potato production and learn who is interested in seed production. This, I suggested was beyond the objective of the study. Rather we need to

focus on understanding the costs of seed production at every step for the case of Mali in order to estimate a total cost which may be compared to the price of imported seed potato. For that we do need to visit producers of regular potatoes in one or two areas, but not all places where potatoes are grown. The costs of producing regular potatoes will inform some of the variables we need to estimate for seed production. Especially important will be visiting the pilot production of mini-tubercles in which the Katibougou Polytechnic Institute has engaged some farmers in Ségou. The cost associated with these growers will be the most realistic for estimating the costs of field multiplication of seed. Whereas Ségou is unlikely to be appropriate for seed potato production for phytosanitary reasons, the variables entering into the costs of seed multiplication that are documented there can be re-quantified in terms of a site far from regular potato production and thus far from diseases such as bacterial wilt. The questionnaire also contains a section interviewing local seed suppliers. This part of the questionnaire should be a useful contribution to predicting feasibility of a local market. We agreed that an important part of the approach for finishing the seed study will be a careful documentation of all variables that affect costs are every step, even if we do not have information to quantify those variables at the time. By developing a detailed qualitative model of the costs at each step, we will have built a basis for the eventual development of a quantitative model. Furthermore, a qualitative model can provide insight into processes that might otherwise be ignored.

In the afternoon I worked with Sidiki Traoré on formatting the spreadsheets and entering data from two of the blister beetle research activities in a way that will facilitate analysis.

### ***Thursday 16 December***

We planned to leave for Sikasso at 9am, but were delayed until 1pm for maintenance and some work Madame Gamby needed to finish. The team was Madame Gamby, Abdoulaye Camara, Allihoun Diarra (all from IER/Sotuba) and myself. We arrived in the early. The highway between Niena and Sikasso was under re-construction, making a long detour on a dusty temporary road necessary. The extremely fine dust infiltrated the vehicle and created temporary brownouts when trucks came from the other direction.

### ***Friday 17 December***

We got a flat overnight from something we ran over the day before. Abdoulaye promptly dropped of the tire to get it fixed, so we lost no time getting started with our meeting.

### **IER/Sikasso**

We visited the IER/Sikasso station to discuss the AFSI rice activities with Yacouba Doumbia, head of the rice program. Upon arriving I met Boua Diarra through Madame Gamby. He has done some research on mango fruit flies in Sikasso. I said we would put him on the report recipient list to receive reports from the Senegal mango IPM associate award. He was not there. Madame Gamby had not called ahead. Instead we met with Moro Traoré, the station plant pathologist who has worked with us on several previous field visits. Giving presenting the progress report was Youssouf Coulibaly.

The IER/Sikasso team has installed trials that were supposed to be carried out in collaboration with the women of Niena and M'Pegnesso. Thirty women at Niena had



previously expressed interest. Fifteen participated. Eight producers in an upland area were set up with the upland variety Nerica 8 and seven producers were set up with the lowland variety DK11 in the bas-fond. Madame Gamby requested that the technical bulletins on these varieties be sent to us. These varieties were recommended by the IER plant breeder for high yield and pest resistance, but we had no specific information about the varieties. At the time of our visit, IER was weighing rice to determine the yield. The he “technology package” of variety+fertilizer known as APRAGIR was being compared with village methods of production (local variety and local practice). I pointed out that this comparison does not allow the contribution of treatment effects to be distinguished and that it would be surprising not to find a yield benefit from using fertilizer. Therefore, the results will give us little information regarding the suitability of the variety compared to others. However, we will have some information on its performance in women’s rice fields.

Youssouf and Moro said that the women’s group was not very dynamic. When we asked why, we were told that the women who volunteered to work with IER ended up not doing any of the plot maintenance they had agreed to. Further discussion led to the fact that the IER team planted the plots in Niena and M’Pegnesso between 17-21 July, one month after the women had already planted their household rice plots. In addition to adding another uncontrolled variable to the experiment, late seeding probably did little to build confidence in the test. Also, trials may have been direct seeded instead of transplanted. I need to check on that fact. It would not be surprising if the rice producers of Niena had little motivation to help the IER researchers because of the lateness of seeding. Moro said that the women left the maintenance of the plots to the IER researchers. They suggested perhaps moving the work to the village of Loutana next season. Whereas they and other people with whom I spoke had high regard for the women rice growers of Loutana, subsequent discussions led me to the opinion that the problem IER had working with the women’s group of Niena was mostly the fault of IER/Sikasso.

IER’s esteem of the growers’ motivation in M’Pegnesso was higher than those in Niena. Moro and Youssouf said the trial proceeded better there. IER said that growers in M’Pegnesso help each other, whereas the women in Niena work for themselves. It is true that the women in Niena work as individual growers on their own plots. A village of individual growers with access to group credit is, in fact, a good model for artisanal rice seed production. The group at M’Pegnesso is not a women’s group; it is a rice grower group with both women and men members. Twenty growers participated in the IER trial at M’Pegnesso – eleven men and nine women. No substantial problems were reported. The expected labor was provided for the plots and weeding was good. Because M’Pegnesso is close to the IER rice field station, the growers are in the habit of working with researchers. Youssouf said he would send us a report on the rice work. Madame Gamby suggested a results meeting among the partners to see what was accomplished in Niena and M’Pegnesso in 2010

In discussing villages with dynamic women’s groups, IER mentioned Loutana, not far from M’Pegnesso, and Fenkolo, about ten kilometers from Niena.

To the relief and surprise of Madame Gamby and myself, we learned that that IER/Sikasso took soil samples at Niena and M'Pegnesso as agreed in August 2000. What it did not do was send them for analysis at the Sotuba soil lab and VT as agreed. Baba the soil scientist was not at the office the day we visited, so IER insisted on keeping the samples and preparing them for shipment to Sotuba. Madame Gamby and I agreed that this task would be followed-up soon in expectation of quickly receiving the samples for testing.

Madame Gamby left with Abdoulaye and Allihoun to visit the tomato and potato trials they set up in Sikasso. I went with Moro to visit the local IICEM office. I had earlier passed by to set up an appointment. I suggested Moro come with me so that we could get the office directors opinion about the ease of working in Niena. IICEM was the project that led IPM CRSP to both Niena and M'Pegnesso.

### IICEM/Sikasso

At the IICEM office Moro and I met Brehima Dagnoko, coordinator of IICEM's Sikasso office. IICEM completed its responsibility in the collaboration between it, IPM CRSP, WASA, and Peace Corps. It facilitated the establishment of private credit by the Banque Nationale de Credit Agricole (BDNA) to women's groups or grower associations in Niena (4 million CFA), M'Pegnesso (10.9 million CFA), Loutana, and Fenkolo. Therefore, our target growers for seed rice production have access to credit with which they can invest as they see fit between seed production and household production. In IICEM's history with Niena, he said cooperation has always been good, with no discernible difference between Niena and other villages. He did note that Loutana and Fenkolo are dynamic villages. Fenkolo, near Niena, may be a better site for placing a Peace Corps volunteer because it is further from the main road and more rural. Brehima explained that IICEM's objective in these villages has been to promote the production of seed for the growers' own use, not necessarily for commercialization. Therefore, the promotion of certified rice seed for sale is a moderate departure from the original objective. Oussa Keita is the office's assistant for rice work. She was on leave, so I did not meet her.

### IER/Sikasso Director's Office

Moro and I returned to IER at 11:30am where we had a debriefing with Harouna Yossi, director of the IER station. We briefed him on our discussions at IER with Madame Gamby earlier in the morning and what we had learned from IICEM. I reiterated the nature of the collaboration that was envisioned between IPM CRSP (through IER), IICEM, WASA, and Peace Corps to promote the production of certified seed. I mentioned our intention to have a meeting well before the next season to review the results of the 2010 season and plan for 2011. I requested that he brief Yacouba Doumbia about our discussions when he returns to Sikasso. Director Yossi offered a vehicle to take Moro and me to the *Direction Regionale d'Agriculture* (DRA) for a courtesy visit to the director and to learn more about the progress of DRA to get the seed certification process moved closer to the area of production.

### Direction Régionale d'Agriculture

At DRA, Director Seydou Keita, excused himself out of a meeting to meet briefly with me and Moro. I thanked him for making time with this impromptu visit. He explained the needs of the seed certification laboratory. The laboratory does not yet have the supplies and equipment it needs to serve as an antenna of LaboSem in Sotuba. Having LaboSem technicians in Sikasso has been under development for approximately two years. When last visited DRE in August 2009, there was a plan for technicians to start the antenna laboratory. During this visit, the director explained that the candidates had been selected, trained at Sotuba, and returned, but the laboratory was not yet functional. On my part, I described the objective of the collaboration between IPM CRSP, IICEM, WASA, and Peace Corps to promote certification of rice seed by women's groups. I further explained the role that DRA will have as an inspection service as a facilitator for the project to obtain important information on the level of red rice contamination in lots submitted for certification.

### Meeting at WASA/Sikasso

The IER vehicle dropped me off at the hotel where I worked until a late afternoon meeting at the Sikasso office of WASA. There I met Karamoko Traoré team leader of the Sikasso WASA office, Ibrahima Sango, and Gaoussou Diawara. They kindly spend over almost an hour and a half with me late on a Friday afternoon. WASA carried out its responsibility for the collaboration planned for the 2010 season and had us well placed to succeed in the next season. It carried out training in November on seed production with the women of Niena (15) and rice growers from M'Pegnesso (9 men, 6 women). This was a two-day training on seed production and the certification process with the emphasis placed on rice. WASA also carried out on-farm varietal trials in Niena of vegetables (lettuce, tomato (3), okra (Koni) and did a large-scale demonstration plot in collaboration with DRA of the rice variety Indam 22, a hybrid upland variety.

With respect to seed production next year, I said that we need to select varieties grown by that will be in demand in the seed market. They said that WASA has close relations with agro-dealers, and WASA can use that relationship to help the consortium determine the variety or varieties that should be promoted next year.

Paddy seed fetched 500CFA/kg in 2008, but the price has declined to 350CFA/kg. A former project called PAFISEM supported DRA to buy rice seed for food security stocks. As a buyer of last resort, PAFISEM supported DRA paying 250CFA/kg for seed rice.

Table rice is currently sold for about 325CFA/kg hulled. Because seed rice is sold as unhulled paddy, there is only about 70% of the grain as in hulled table rice. I was told that table rice is equivalent to 175-200CFA/kg if it were paddy. The calculation works out closer to 227CFA/kg. Naturally, this value fluctuated with the value of table rice.

Since 2008, WASA has paid for the inspections that DRA carries out in the certification process. PAFISEM did this before that project ended. When a grower wants to grow certified seed, she files a "declaration de culture" at DRA. This obligates DRA to do the field inspections required of the certification process. WASA also supports the creation of

the new seed analysis laboratory that is supposed to come online soon to allow locally administered rice seed testing. The reason for setting up a seed testing lab in Sikasso is to speed up the seed assays that culminate the certification process. Currently, growers must wait for certification from the main seed lab in Sotuba. Seed cannot be sold until it is certified, so delays in certification keep it off the market and add risk to the activity from the perspective a grower.

WASA had worked with the rice growers of Niena since 2006, but not on seed production. Training in seed production there and in M'Pegnesso began with the collaboration proposed by IPM CRSP in 2010. In considering Loutana and Fenkolo, the other candidate villages that had been discussed by IER and IICEM, WASA has activities in Loutana but not in Fenkolo. WASA has close relations with agro-dealer who works in Fenkolo. Before leaving I mentioned Madame Gamby's suggestion for the partner institutions to meet in Sikasso to discuss results and carefully plan the next season together.

### ***Saturday 18 December –***

We left Sikasso at 0600h and made it back to Bamako by noon despite getting bolt through a tire on the dusty detour road between Sikasso and Niena. In the afternoon I worked on the computer.

### ***Sunday 19 December –***

I had a 1100h meeting with Professor Hamidou Maiga, Chief of Pedagogy at the University of Bamako. The topic of our discussion was the process for enrolling Kemo Badji in a PhD program there. Kemo and VT faculty members Don Mullins and Carlyle Brewster had met with him in October. Hamiou and I spent about two and a half hours discussing the graduate program proposed and the means to pay for it. Instead of paying a single bill, I suggested we pay the tuition for Kemo separately from Virginia Tech and establish a subaward with the university in place of the "frais de paillasse" used to support students. These fees are typical, but the amount of the fees are not standardized, making their payment problematic. A subaward for direct support to the lab would make expenses easier to track and easier to justify apart from Kemo's direct needs, especially being that most of his work will be carried out in Senegal. It furthermore brings a university partner to the West Africa program, which currently has none. In the evening I developed a draft budget, budget narrative, and terms of reference for Don Mullins and Debbie Francis to review.

### ***Monday 20 December –***

Direction Nationale d'Agriculture (DNA). At 0845h I met with Bakary Timbo, who carries the IPM CRSP portfolio at DNA and the Director General. We reviewed the start-up tasks that had been agreed to in the Year 1 workplan and discussed how to start making progress. DNA has already contacted some stakeholder institutions and received commitments to participate in the phytosanitary committee that DNA will use to design its quarantine pest database. We reviewed the steps to issuing a subaward to DNA, including the development of the budget, which had not yet been submitted. We discussed the options for pre-financing by DNA or the availability of an advance from Virginia Tech if a bank account was dedicated to the project. The DG explained that opening a separate

account will have to go through the ministry and that the project will need official recognition for DNA to obtain this permission. I stated that we can proceed with establishment of a subaward, holding off on providing an advance until these formalities are completed at objectives of our proposed collaboration in the Mali IPM associate award.

### USAID

At 1000h Madame Gamby and I travelled separately to USAID. We met with Mamadou Augustin Dembelé the AOTR of the Mali IPM associate award, Jean Harman the economic growth office director, and Aminata Diarra the environment and NRM specialist in the economic growth office. I gave a summary of the ongoing activities in the Mali IPM associate award and the EGAT-funded food security project. Among the discussion was the state of progress and the challenges to success in promoting certified rice production by women smallholders in Sikasso. I emphasized that IICEM and WASA had fulfilled their responsibilities and that we were well placed for the collaboration to bear fruit in 2011. We discussed good models for performance management plans. Augustin encouraged us to develop custom indicators to measure success of the Mali IPM associate award. We were advised to try to meet with USAID both at the beginning and the end of trips.

I proceeded from USAID to the airport, catching a Ethiopian Airlines flight to Dakar. Upon landing in Dakar, Kemo Badji of DPV and I went to the USAID mission to meet with Peter Trenchard. We discussed the current financial status of the mango IPM associate award, whose no-cost extension will end 31 March 2011. At the moment, the opportunity for further funding remained uncertain despite the mission's interest in continuing work on the problem. I explained how a three-year program was described within the draft Year 3 workplan that was submitted in November. In January we should know if further funding will have been possible.

***Tuesday 21 December*** –  
Return to the United States

### **Abbreviations:**

AFSI. African Food Security Initiative. (IPM CRSP associate award)

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

AOTR. Agreement Officer Technical Representative

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

DRA. *Direction Régionale d'Agriculture* (Mali)

DNA *Direction Nationale d'Agriculture* (Mali)

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

IER. *Institut d'Economie Rurale* (Mali)

IICEM. *Initiative Intégrée pour la Croissance Economique au Mali*

ISRA. *Institut Sénégalais des Recherches Agricoles*. Dakar (Senegal)

ISRA/CDH – ISRA *Centre de Développement Horticole*

OIRED. Office of International Research, Education, and Development. Virginia Tech

OPV *Office de Protection Végétaux*  
 NRM. natural resources management  
 USAID. United States Agency for International Development  
 ToT. training of trainers  
 VT. Virginia Tech. Blacksburg, Virginia USA  
 WASA. West African Seed Alliance

**Contact List:**

<b>First Name</b>	<b>Last Name</b>	<b>Institution</b>
Aminata	Badiane	AOTR, Mango IPM associate award. USAID/Senegal
Kemo	Badji	DPV
Assa	Balayara	UCAD
Abdoulaye	Camara	IER/Sotuba
Youssouf	Coulibaly	IER/Sikasso
Emile Victor	Coly	Director, ISRA/CDH
Brehima, coordinator of	Dagnoko	Coordinator. IICEM/Sikasso
Mamadou Augustin	Dembélé	AOTR, Mali IPM associate award. USAID/Mali
Allihoun	Diarra	IER/Sotuba
Aminata	Diarra	Env. & NRM Specialist. USAID/Mali
Marie	Dieng	ENSA
Aminata	Doucouré	IER/Sotuba sociologist
Kadidiatou	Gamby	Chief of the Vegetable and Fruit Research Laboratory. IER/Sotuba
Mour	Gueye	ANCAR
Jean	Harman	Office Director for Economic Growth. USAID/Mali
Seydou	Keita	Director, DRA/Sikasso
Safoura	Mariko	OHVN accountant
Demba Farba	Mbaye	ISRA
Simon	Ndene	ANCAR
Saliou	Ndiaye	ENSA
Bourema	Outtara	OHVN chief accountant
Abdoulaye	Sissoko	OPV
Penda	Sissoko	IER/Sotuba agricultural economist
Bakaye	Thierno	Director General, OPV
Bokary	Timbo	DNA
Karamoko	Traoré	Team leader. WASA/Sikasso
Moro	Traoré	IER/Sikasso
Sidiki	Traoré	IER/Sotuba
Peter	Trenchard	Team Leader for Economic Growth. USAID/Senegal