

IPM CRSP Trip Report

Countries Visited/Dates of Travel: Senegal 19-20 March; Mali 20-25 March 2011

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Purpose of Trip: Present a 3-day mite training workshop at IER Sotuba, Mali

Sites Visited: Dakar and local field sites, Senegal; Bamako and field sites including Baguineda, Mali

Description of Activities/Observations:

Friday 18 March. Depart Seattle, WA 0630h, DL 1542 (SEA to JFK) DL 216 (JFK to DKR)

Saturday 19 March. Arrival Dakar, Senegal 0550h

Traveled with Muniappan, Gilbertson, Badji and Vaughn to view field trials with opportunity to observe spider mites and damage to tomato and eggplant. The fieldtrip provided firsthand opportunities to observe cropping systems and dry season effects on spider mite populations with implications for control of mites damaging tomato and eggplant in Senegal. Discussions further clarified challenges and constraints of mite control while addressing crop disease issues for Senegal farmers.

Sunday 20 March. Reviewed material for mite workshop. Depart Dakar, Senegal 1640h, KQ 513 and arrival in Bamako, Mali 1835h.

Monday 21 March. Traveled with Muniappan, Gilbertson, Noussourou, Kane and Vaughn to Baguineda. Collected mites for the workshop and photographed mite damage. Observed tomato, eggplant and cabbage trials. The trip provided valuable information on planting methods, cropping systems and potential sources and reservoirs for mites as well as climatic/habitat conditions (i.e. temperature, dust) and their effects on mite populations.

Tuesday 22 March. First day of mite training at IER Sotuba. Opening remarks by Dr. Adboulaye Hamadoun, IER Director and Madame Gamby, welcoming Papa Demba Kane ISRA and myself and highlighting the need for research into acarology

specific to Mali. Participants were provided materials and activities included both classroom and hands-on opportunities for collecting and observing mites in the field and microscopic examination in the laboratory. The first day focused on basics including: taxonomy, classification, life cycle and identification of mite pests, damage and beneficial mites and primary mite families which include pest species in Mali, etc. (see syllabus provided).

Wednesday 23 March. Second day of the workshop began with handling and collecting activities (beat tray) to promote proper search image and skill in recognition and individual practice in collecting and manipulating mites using a fine artist's brush. Participants were given instruction on slide making techniques and curation methods with opportunities to make slides. Classroom instruction continued with discussions on pest and beneficial mites punctuated by question and answer periods. Collection, survey and sampling methods were discussed, with continued individual opportunities in slide-making and microscopic examination of mites (see attached syllabus) from freshly made slides as well as prepared slides from the private collection of Dr. Lynell Tanigoshi, WSU NWREC.

Thursday 24 March. The final day of the workshop primarily focused on predatory mites, potential and challenges (troubleshooting, economics of rearing with "real-life" examples from the WSU/USAID funded project in the Philippines to serve as a model for use in controlling phytophagous mites in Mali) of moderate and small-scale production methods. The potential for combination of biological control approaches was discussed, including predatory mites, fungal pathogens (i.e. *Neozygites* sp.) and insect predators such as *Stethorus* sp. and *Oligota* sp. (see syllabus). The participants responded positively to the information provided in the workshop and expressed continued interest in acarology. Papa and I provided contact information and promised continued support and assistance. It was a consensus of the workshop participants as well as Papa and myself that there is a need for a baseline survey of mites on selected crops in Mali. The baseline survey should provide: (1) list of phytophagous mites (2) list of their host plants (3) list of associated predatory mites and beneficials (4) GPS coordinates for collecting locations and (5) a reference collection, including both slide mounted and alcoholic voucher specimens. This information would provide a valuable reference tool for students and agricultural researchers and potentially assist in management and pest outbreak prediction.

Friday 25 March. Depart Bamako 2330h, DL 8463/AF 3093 (BMK to CDG), DL 8628/ AF 0306 (CDG to SEA)

Saturday 26 March. Arrival in Seattle via Paris and Dakar at 1255h

Organization Abbreviations:

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

IER. *Institut d'Economie Rurale*, Mali

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

WSU NWREC. Washington State University, Mount Vernon Northwestern Washington Research & Extension Center, Washington USA

UC. University of California, Davis, California USA

VT. Virginia Tech, Blacksburg, Virginia USA

Training Activities Conducted

Program type (workshop, seminar, field day, short course, etc.)	Date	Audience	Number of Participants		Training Provider (US university, host country Institution, etc.)	Training Objectives
			Men	Women		
IPM CRSP Acarology (mite) training workshop	22-24 March 2011	Primarily professional staff and Technicians IER	10	3	Consultant from WSU NWREC. Workshop funding provided by VT.	Introduction to agricultural acarology and biological control using predatory mites with emphasis on distinguishing between phytophagous and beneficial mites.

Contact List:

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* Workshop participants in Italics