

## IPM CRSP Trip Report

**Country Visited:** Ghana

**Dates of Travel:** October 26 – November 4, 2012

**Travelers Names and Affiliations:** Dr. Robert Gilbertson, Department of Plant Pathology, University of California-Davis  
Dr. Sally Miller, Department of Plant Pathology, The Ohio State University

**Purpose of Trip:** 1) Conduct a disease and pest survey of tomato in production areas where IPM packages are being implemented; 2) meet with IPM CRSP team in Ghana to plan Year 4 activities; and 3) meet with graduate student and advisor at the University of Ghana - Legon to provide input on student's research proposal and review results to date.

**Sites Visited:** Accra, Kumasi, Agogo, Akumadan, Tanoso, Tuobodom, Ve, Tono irrigation district, Pwalugu.

### Description of Activities/Observations:

- 1) Pest and disease survey: The IPM CRSP team (Osei, Osei, Moses, Gilbertson, Miller) traveled by truck from Kumasi to the far north of Ghana. In total we surveyed 20 fields in three major tomato growing areas (Ashanti, Brong Ahafo, and Upper East (northern Ghana) production regions). Bacterial wilt, bacterial spot, Septoria blight, early blight, putative viroid, *Cucumber mosaic virus* and root knot nematode were found in one or more tomato fields. We also visited the Northern Star Tomato Cannery and discussed means in which tomato production can be improved in the region. The cannery is operating at a very reduced level and was not operational during our visit.
- 2) Meet with IPM CRSP team: Discussions were held regarding establishment of dry season IPM trials further testing the IPM packages.
- 3) Meet with Univ. Ghana graduate student (Salim Lamini) and advisor (Eric Cornelius): We met with Eric Cornelius on October 28 and discussed his cooperative research project on tomato bacterial spot. We met again with Eric and his graduate student Salim Lamini to review research progress and plans for his M.Sc. project, including surveys, pathogen identification, assessment of seed infestation, seed treatment and variety evaluation.

### 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 Objective
			Men	Women		
Train-the-Trainer	Week of October 29	Extension agents (6), grower leader (1)	5	2	Crops Research Inst.(CRI), Kumasi, OSU, UC-Davis	Train extension agents and grower-leaders in field diagnosis of bacterial wilt (field streaming test) and viruses (immunostrips)

### Suggestions, Recommendations, and/or Follow-up Items:

Gilbertson and Miller will provide Michael Osei with seeds of a few additional tomato varieties for analysis, with an emphasis on rainy season varieties. It became very clear that the nature of tomato production in Ghana will require two IPM packages: one for the dry season and one for the rainy season. We encouraged Michael Osei to move ahead on selecting lines of one or more of the open-pollinated varieties that perform well in Ghana for development and release of a new variety that could play a role in dry season production. We will also provide training materials for the M.Sc. student Saleem Lamini. It is critical that the vehicle purchase for the IPM CRSP project in Ghana be accomplished as soon as possible in order to facilitate fieldwork and surveys. It is also critical that a sub-award to the University of Ghana –Legon for support of Salim Lamini be completed and funds sent to Eric Cornelius' program, as agreed upon previously. It would be very helpful to send Lamini to OSU for training in bacteriology for 1-2 months, if funding were available.

### List of Contacts Made:

Name	Title/Organization	Contact Info (address, phone, email)
Madam Teni Tia	Grower-leader, Tono	Pwalugu

	Irrigation District	
Mr. Dauda Fifi Obeng	Extension Agent	Agogo
Mr. Ketor Kobla	Extension Agent	Akumadan
Ms. Francisca	Assistant to Extension Agent	Akumadan
Mr. Abdullai Salifu	Extension Agent	Tanoso
Mr. Akoto	Grower-leader, Tuobodom	Tuobodom
Mr. Robert Atinga	Extension Agent	Vea
Mr. Eddie	Extension Agent	Tono
Kwabena Darkwa	Farm Operations Manager	North Star Tomato Cannery
Branford Moses Mochiah	Entomologist/CRI	Kumasi
Kingsley Osei	Nematologist/CRI	Kumasi
Michael Kwabena Osei	Plant Breeder/CRI/team leader	Kumasi