IPM Innovation Lab Trip Report

Country(s) Visited: Ethiopia

Dates of Travel: May 9 to 19, 2018

Travelers' Names and Affiliations: Dr. Wondi Mersie, Virginia State University (VSU)

Purpose of Trip: to assess activities at bioagent rearing sites located at Guder (Ambo University) and Wollenchiti.

Specific objectives of the trip were to:

(i) To visit the bioagent mass rearing sites at Guder and Wollenchiti and assess the status of each biological agent.
(ii) To discuss with staff about the challenges and opportunities at each rearing site.
(iii) To confer with partners about the progress of bioagent rearing and the coming year work.
(iv) To review the progress of the rearing activities at each site and if necessary make changes on the procedures followed to raise *Parthenium* stock and rear Zygogramma as well as Listronotus.
(v) Visit sites where Zygogramma was released and see the conditions of the bioagent.
(vi) To identify potential field sites for bioagent release during the coming season.
(vii) Release Zygogramma and Listronotus at *Parthenium* infested fields.

Sites Visited: Melkassa Agricultural Research Center (Ethiopian Institute of Agricultural Research), Wollenchiti bioagent rearing site, Ambo University (Guder Campus), Koka parthenium infested field

Description of Activities/Observations:

Itinerary:

May 9: Traveled to northern Virginia to spend the night for the morning flight.

May 10: Fly from U.S.A. to Addis Ababa, Ethiopia

May 11: Arrived in Addis Ababa, Ethiopia.

May 12: Met Ms. Sintu (Lidya) Alemayhu, VSU's Parthenium Project Coordinator in Ethiopia. Travelled to Wollenchiti to meet the workers at the rearing facility and examine the statuses of the Zygogramma and Listronotus cultures. Suggestion were made on how to grow quality *Parthenium* stock to rear the bioagents and improve the handling of the agents. Delivered supplies brought from U.S. for rearing the bioagents. Traveled to Koka (60 miles southeast of Addis Ababa on the road to the city of Hawassa) to visit sites where Zygogramma was released. Examined *Parthenium* plants for eggs, larva and adults of Zygogramma.

May 13: Travelled to Guder to visit the rearing facility and confer with staff who works there. The rearing facility is located on a satellite campus of Ambo University (AU) at Guder. Met AU faculty who are collaborating on the parthenium project and held discussion with Dr Mulugeta Negari, former Dean of the College of Agriculture and Veterinary Science. Met with staff at the rearing site and discussed the challenges they face. Delivered supplies brought from U.S. for the rearing site. Met with Tesfay Amare, and Fulae Gelana a faculty member and at technical staff at Ambo University, respectively to discuss potential field experiments to demonstrate the safety of Zygogramma on the oil seed crop, noog.

May 14: Stayed in hotel to make phone calls to partners outside of Addis Ababa.

May 15: Traveled to Melkassa Agricultural Research Center to select release sites for Zygogramma. After sites with heavy *Parthenium* were selected, a trip was made to Wollenchiti to bring Zygogramma adults for release. In the afternoon four hundred adults of the beetle were released at a site around a pond.

May 16: Traveled back to Melkassa Research Center to prepare sites and release Zygogramma. Six 1 m^{-2} spots were identified at different locations at Center and their four corners were marked with wooden posts. Then four hundred adults of Zygogramma were released in each marked spots. The establishment and spread of Zygogramma adults from each location will be monitored in the coming months.

May 17: Spent the day making phone calls to partners about the on-going work and plan for the coming rainy season.

May 18: Met Million Abebe and discussed his participation in the release and monitoring of the biocontrol agents in the coming rainy season.

Traveled back from Addis Ababa to U.S.

Training Activities Conducted: no formal training session was organized on this trip.

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

Suggestions and recommendations were provided on how to produce quality parthenium stock for rearing the bioagents on a regular basis. Staff have been instructed to seed and transplant parthenium every week. They are also asked to fertilize and water the potted parthenium seedling on regular bases to produce quality stock for rearing. Recommendations were also made on how to increase the number of adult Zygogramma and Listronotus reared at each site.

List of Contacts Made:

Name	**Title/Organization**	**Contact Info (address, phone, email)**
Eyasu Aberaha	State Minster of Agriculture	Ministry of Agriculture and Livestock, Addis Ababa, Ethiopia
Mulugeta Negeri	Faculty member, College of Agriculture and Veterinary Science at Ambo University, Guder Campus	+251911896296 negerimulugeta@yahoo.com
Tesfay Amare	Lecturer; Ambo University	+251 963307801; e-mail : tesfayshire@gmail.com
Fulea Gelana	Laboratory technician; Ambo University	+251 920162113 e-mail: fula2012@gmail.com
Asmaret TekleMariam	Technician; Ambo University; Guder Campus	+251912953028
Emawayush Mulet	Technician; Ambo University; Guder Campus	
Derartu Ebisa	Technician; Ambo University; Guder Campus	
Bekele Gelana	Technician; Ambo University; Guder Campus	
Mulu Haile Giorgis	Technician; Wollenchiti	
Demeku Zewdie	Technician; Wollenchiti	
Kassa Gurge	Technician; Wollenchiti	
Kassahun Zewdie	Senior Researcher; EIAR	+251 911186486 email:kassahunzewdie@yahoo.com
Lidya Alemayhu	Coordinator of Parthenium Project; VSU	+251913246933 e-mail: sintualemayhu@gmail.com
Kassahun Zewide	Parthenium Project Coordinator, Ethiopian Institute of Agricultural Research	Email: kassahunzewdie@yahoo.com
Million Abebe	Parthenium Project Contractor	abebemdz@gmail.com