

IPM Innovation Lab Trip Report

Country(s) Visited: Ethiopia

Dates of Travel: 19- 26 April 2019

Travelers' Names and Affiliations: Ms. Lidya Alemayhu, contact number + 972 587905636 Email : sintualemayhu@gmail.com

Purpose of Trip: To monitor the establishment of the biological agents, *Zygogramma* and *Listronotus* released for the control of the invasive weed, Parthenium around the Arba Minch area.

Specific objectives of the trip were to:

- (i) To visit the mass rearing sites of biological control agents, the leaf-feeding beetle *Zygogramma bicolorata* and the stem-boring weevil, *Listronotus setosipennis* at Wollenchiti, Ethiopia.
- (ii) Provide training on fertilization and maintenances of parthenium seedling growing technique for rearing of biological control agents in Wollenchiti rearing site
- (iii) To monitor and evaluate the release sites around Arba Minch where the two biocontrol agents were released in 2018.
- (iv) To provide training on rearing and monitoring of *Zygogramma* and *Listronotus* for the staff working in Arba Minch Plant Health Clinic
- (v) To identify future release sites for the two biocontrol agents around Arba Minch.

Sites Visited: Arba Minch Plant Health Clinic, Arba Minch Agricultural Research Center, and Wollenchiti bioagent rearing site

Description of Activities/Observations:

Itinerary:

April 19: Travel from Israel to Addis Ababa, Ethiopia

April 20 & 21: Planning and organizing for Monday's trip to Arba Minch with Dr. Wondi

April 22: Flew to Arba Minch along Dr. Wondi Mersie. In the afternoon, with director of the plant health clinic, Muluaem Mersha, Dr. Wondi Mersie and Lidya Alemayhu visited the sites where *Zygogramma* and *Listronotus* were released in 2017 and 2018. After field inspection, we found eggs, larvae and adults of *Zygogramma* on parthenium seedlings from the releases done in 2017 and 2018. We also observed severe damage caused by the bioagents on Parthenium. Dr. Wondi, Muluaem and Lidya also visited Arba Minch Agricultural Research Center, who provided secured area for the bioagent released in 2018. We met with the director of the center, Mr. Germaw Dolisso, and discussed the coming season. He also indicated that he will continue the collaboration with the Parthenium Project in the future.

April 23: In the morning Dr. Wondi, Muluaem and Lidya visited release sites located in Arba Minch Agricultural Research Center. At all the release sites, eggs, larvae and adult of *Zygogramma* were found on parthenium. *Zygogramma* has spread to new location from its original release spot. A few eggs and larva of *Listronotus* were also found from the release of 2018.

In the afternoon, Dr. Wondi, Muluaem and Lidya returned to the compound of the plant health clinic to meet other staff members. The Clinic is in the process of repairing a small greenhouse for rearing *Zygogramma*. Training provided by Lidya to staff on handling and multiplying the biocontrol agents and how to use the mass rearing materials provided by Dr. Wondi. Further discussion was held with Muluaem and staff on how to get the facility ready for rearing in the coming rainy season.

April 24: Lidya and Dr. Wondi flew back to Addis Ababa.

April 25: Lidya and Dr. Wondi traveled to Wollenchiti to visit the biocontrol rearing facility. Lidya inspected the rearing facility and provided suggestions and recommendations on how to maintain the culture (bio agents) for further mass rearing (gave instruction to the worker to improve the rearing activity and growing by using pest and disease free parthenium seedling).

April 26: In the morning, planning and discussion with Dr. Wondi for the coming season.

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

Suggestions and recommendations were provided on how to produce quality parthenium seedling for rearing the bioagents on a regular basis. Recommendations were also made on how to increase and maintain the number of adult *Zygogramma* and *Listronotus* reared in Wollenchiti.

List of Contacts Made:

Name	Title/Organization	Contact Info (address, phone, email)
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