

Feed the Future: Innovation Lab for Integrated Pest Management Trip Report

Country(s) Visited: Tanzania

Dates of Travel: 22-23 Nov 2018

Travelers' Names and Affiliations: Tadele Tefera

Purpose of Trip: The objectives of the trip were:

- Follow-up on students' activities
- Plan for next year 2019 season.

Description of Activities/Observations:

The meeting was attended by:

- Elibariki Nsami- maize IPM
- Charles Chuwa- Rice IPM
- Bonaventure January- Graduate student
- Ibrahim Hashim- Graduate student

Plan for next year

Nsami would like to reach out to about 50 additional new farmers with the push pull technology in Morogoro areas while Dr. Chuwa is planning to reach out to about 500 farmers/farmers' group with the rice IPM. The meeting discussed that farmers' selection to be made in December and planting to start as soon as the rain starts. Further, it was discussed that Elibariki would join Peter Malusi of icipe in surveying for FAW egg parasitoids in December/January in Tanzania. Also discussed the possibilities of training a lab technician and mass rearing the parasitoids in Tanzania and identified National Biological Control Centre at Kibaha as an ideal site for establishing the rearing.

Students' progress

1. Bonaventure January

PhD title: Management of rice stem borers in irrigated low land rice ecosystem in Tanzania

Specific objectives/chapters:

1. Farmers' perceptions of rice production constraints and stem borers management practices in irrigated low land rice ecosystem in Kilombero valley, Morogoro, Tanzania

Progress

- A paper has been published in Journal of Agricultural Science Vol. 10, No. 6, 2018
2. Species abundance and damages associated with Lepidopteran stem borer in irrigated low land rice ecosystem in Tanzania

Progress

- A paper has been published online in Journal of Entomology Vol. 15, No. 1, 2018.
3. Distribution of rice stem borers and their parasitoid in irrigated low land rice ecosystem in Kilombero valley, Morogoro, Tanzania

Progress

- A paper has been published to Journal of Entomology and Zoology studies Vo. 6, No. 2, 2018
4. Efficacy of selected mycoinsecticides and botanical extracts in managing rice stem borer, *Chilo partellus* (Swinhoe) (Lepidoptera: Crambidae) in Tanzania

Progress

- A paper has been published in Journal of Agriculture Research and Ecology International Vo. 15 No. 4, 2018

5. To determine the effects of spacing and nitrogen fertilizer on incidences of rice stem borers in irrigated rice ecosystem

Progress

- Draft paper has been prepared and it is currently under editing and proof reading by co-authors.
6. Seminar presentations
 - Two progress seminars have been presented to the department of Crop Science postgraduate committee of Sokoine University of Agriculture among the three seminars (requirements for PhD students before submission of thesis for examination)

Plan for 2019

- Working on the comments of the draft paper from the co-authors and submission to the journal for publication consideration
- Presentation of the third seminar to the department postgraduate committee of Sokoine university of Agriculture
- Preparation of thesis and submission for examination

2. Ibrahim Hashim

PhD title: Rice blast disease (*Pyricularia oryzae* Cav.): incidence, severity, genotype reaction and management in upland rice in Tanzania

Specific objectives/chapters:

1. Smallholder farmers' knowledge, perception and management of rice blast disease in upland rice production system in Tanzania

Status: Paper published in Journal of Agricultural Sciences

2. Reduction of rice blast disease initial inocula on rice seeds by microbial and hot water seed treatments

Status: Paper accepted in Australian Journal of Crop Science

3. *In vitro* and *in vivo* evaluation of microbial agents for management of rice blast disease in Tanzania

Status: Paper published in World Journal of Agriculture

4. Effect of rice blast disease severity on yields of selected upland rice genotypes grown in Tanzania

Status: Season 1 trial conducted and data analysis and paper drafting ongoing

5. Field survey to establish the incidence and severity of rice blast disease in upland rice ecosystem in Tanzania

Status: Season 1 field survey conducted and data analysis and paper drafting ongoing

Seminar presentation at the University

It is mandatory to conduct 3 PhD progress seminars to Postgraduate committee. In this case, already conducted 2 seminars; -

- i. Smallholder farmers' knowledge, perception and management of rice blast disease in upland rice production system in Tanzania
- ii. *In vitro* and *in vivo* evaluation of microbial agents for management of rice blast disease in Tanzania

The remaining seminar is scheduled on February 2019.

Plan for 2019

- To conduct 1 seminar presentations at the University

- To conduct season 2 experiment for objective 4 from March to August 2019
- To conduct season 2 field survey for objective 5 from April to June 2019
- Drafting papers for chapter 4 and 5
- Writing PhD thesis
- Drafting review paper on ‘Rice disease and Insect pests in Tanzania.

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

To follow up on nomination of trainees on FAW biological control training in Jan 2019.