

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

Country Visited: Kenya- Bungoma; Kericho and Nakuru Counties.

Dates of Travel: 24 June -1 July 2019

Travelers' Names and Affiliations:

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Purpose of Trip: (1.) Monitoring and evaluation of push-pull demos, (2.) To release (augmentative) biological control agents (*Telenomus remus* & *Trichogramma chilonis*) for the management of FAW.

Sites Visited:

Gichonge village, Dundori ward, Bahati Sub-county, Nakuru;
Kedowa market, Kedowa ward, Kipkelion East Sub-County), Kericho;
Kisiwa and Sirare villages, West Nalondo Ward, Kabuchai sub-county, Bungoma

Description of Activities/Observations:

CAN fertilizer was transported from Nakuru by a hired truck belonging to Rapid Kate Services Ltd to a store in Kedowa (Soi's home) for distribution to push-pull farmers, Kericho county. All farmers hosting push-pull demos will each be issued with 25 kg of CAN fertilizer. The area is experiencing heavy rains and the crop is at knee height stage in most farms.



Visit to host farmer in Nakuru

During monitoring and evaluation, the team visited push-demos in Gichonge village, Dundori ward, Nakuru. It was observed that a few farmers hosting the demos for the first time had challenges in weeding, probably due to the rains experienced in the area.

The second and fourth release of parasitoids for management of FAW in Kedowa market (Kericho) and Kisiwa village (Bungoma) was implemented. A second farm was identified with young maize crop that is susceptible to FAW. While scouting, FAW egg masses were observed. Three FAW egg masses were collected and leaf damage score recorded, after which the parasitoids were re-introduced (released). However, a matching farm with almost same young maize crop was not identified. In Kisiwa village, a total of 12 FAW egg masses were collected. Parasitism of the egg masses was observed. Leaf damage scores were recorded. The rains have subsided in Bungoma and since planting was done a bit late, the crops look water stressed.



FAW egg mass being parasitized by *Telenomus remus*



Farm where parasitoids were re-introduced



Farm with no parasitoids

During the leaf damage scoring, it was observed that the plants showed both stem borer and FAW attack. Three farms each in Bungoma and Kericho were surveyed. In each farm, 100 maize plants were randomly sampled in a zigzag manner and plants with leaf damage either due to stem borer or FAW counted.

Training Activities Conducted: N/A

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

It was observed, particularly in Bungoma, that fewer larvae were found where *Cotesia* cocoons were noted. Based on the overall field observations, suggest the following:

- 1.) Conduct re-introduction of parasitoids in Kericho.
- 2.) Undertake two more re-introductions of parasitoids in Bungoma and continue with FAW leaf damage score for an additional one month (on weekly basis).
- 3.) To conduct lab assessment, which can be piloted in the field, on the additive or synergistic effect of combining egg and larvae parasitoids for the biocontrol of FAW.
- 4.) To evaluate the effectiveness of the combined egg and larvae parasitoids against FAW under irrigated and rain-fed conditions.