IPM CRSP Trip Report

Country Visited: ETHIOPIA

Dates of Travel: 25-29TH NOVEMBER 2013

Travelers Names and Affiliations: MAULID MWATAWALA, SOKOINE UNIVERSITY OF AGRICULTURE, MOROGORO, TANZANIA

Purpose of Trip: TO ATTEND A WORKSHOP ON MANAGEMENT ON Tuta absoluta, AN INVASIVE PEST OF TOMATO

Sites Visited: ADDIS ABABA AND KOKA

Description of Activities/Observations:

1. First day workshop at INTERCONTINENTAL HOTEL in Addis Ababa, 26th November 2013.

   On the first day of workshop, were introduced to general aspects of T. absoluta, including
   (i) taxonomy, monitoring of T. Absoluta using pheromone traps (ii) origin and
   distribution of T. absoluta (iii) biology, host range, and damage symptoms caused by the
   T. absoluta (iv) sustainable management programs of T. absoluta, with cases from
   various countries where the pest occurs, including North and Sub Saharan Africa.

   Additionally case studies from various countries were presented, including places where
   the pest is yet to be recorded.


   Visit of tomato site affected by T. absoluta, at Koka, about 80 Kilometer from Addis
   Ababa. During the visit we learnt (i) how to recognize symptoms of damage caused by T.
   absoluta on tomato (ii) to differentiate symptoms of damage due to T. absoluta from
   those caused by other leaf miners (iii) sampling the immature stages of T. absoluta,
   including eggs and larvae, from tomato leaves (iv) trapping T. absoluta moths using traps
   baited with pheromones. Two types of traps were demonstrated, Delta traps and blue
   basin traps.

   At the end of the visit, we were given sets of traps and pheromones that can be used for
   surveillance of the T. absoluta in our countries.

3. Second day workshop at INTERCONTINENTAL HOTEL in Addis Ababa 28th
   November 2013.

   On the second day of the workshop, participants from countries where T. absoluta has
   been recorded gave specific presentations on (i) use of natural enemies (ii) quarantine
   regulations (iii) monitoring (iv) control methods, including mechanical, cultural and
Finally, techniques (v) evaluation of pheromones for mass trapping in open fields and screen houses and (vi) Integrated pest management of *T. absoluta*.

Finally participants were grouped into zones and drafted recommendations for future activities.

### Training Activities Conducted

<table>
<thead>
<tr>
<th>Program type (workshop, seminar, field day, short course, etc.)</th>
<th>Date</th>
<th>Audience</th>
<th>Number of Participants</th>
<th>Training Provider (US university, host country institution, etc.)</th>
<th>Training Objective</th>
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</thead>
<tbody>
<tr>
<td>Taxonomy, origin and distribution of <em>T. absoluta</em></td>
<td>26/11/2013</td>
<td>ENTOMOLOGISTS</td>
<td></td>
<td>R. Muniappan, Dieneba Sall, Tesfay Belay and Zeray Siyoum</td>
<td>To impart knowledge on general taxonomy, origin and distribution of <em>T. absoluta</em></td>
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<tr>
<td>Biological control of <em>T. absoluta I</em></td>
<td>26/11/2013</td>
<td>ENTOMOLOGISTS</td>
<td></td>
<td>Kaled Abbes, Samira Muhamed Faris, and Brahim Chermiti</td>
<td>To impart knowledge on use of pathogens in controlling <em>T. absoluta</em></td>
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<tr>
<td>Sustainable management of arthropods in African vegetable production systems</td>
<td>26/11/2013</td>
<td>ENTOMOLOGISTS</td>
<td></td>
<td>Jana Collatz, Sweden</td>
<td>To raise awareness on challenges of managing arthropods in African vegetable production systems.</td>
</tr>
<tr>
<td>Biological control of <em>T. absoluta II</em></td>
<td>28/11/2013</td>
<td>ENTOMOLOGISTS</td>
<td></td>
<td>Mohammed E.E. Mahmoud</td>
<td>To impart knowledge on use of natural enemies in controlling <em>T. absoluta</em></td>
</tr>
<tr>
<td>Quarantine regulations applicable to <em>T. absoluta</em>, including Monitoring and mass trapping</td>
<td>28/11//2013</td>
<td>ENTOMOLOGISTS</td>
<td></td>
<td>A.S. Abdel-Razek, Ensaff S.I. Mohamed and Mhammed E.E. Mahmoud</td>
<td>To impart skills and knowledge on monitoring and mass trapping of <em>T. absoluta</em></td>
</tr>
<tr>
<td>Methods of controlling <em>T. absoluta</em>, including mechanical, cultural, chemical, biological</td>
<td>28/11/2013</td>
<td>ENTOMOLOGISTS</td>
<td></td>
<td>Khaled Alarouchdi</td>
<td>To impart skills and knowledge on <em>T. absoluta</em></td>
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Suggestions, Recommendations, and/or Follow-up Items:
1. To create awareness to various stakeholders about the *T. absoluta* and its probable invasion into Tanzania
2. To designing surveillance program for *T. absoluta* in collaboration with National plant Protection Organisation (NPPO)
3. To activate surveillance of *T. absoluta* on all entry points along the border in the northern parts of Tanzania
4. Networking with other Eastern African partners on sharing information about *Tuta absoluta*

List of Contacts Made:

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<thead>
<tr>
<th>Name</th>
<th>Title/Organization</th>
<th>Contact Info (address, phone, email)</th>
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<tbody>
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