Features from your Farm Advisors

March 2015

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SWEET CORN INSECTICIDE EFFICACY TRIAL, 2014

Eric T. Natwick, Entomology Advisor, UCCE Imperial County
Martin I. Lopez, Staff Research Associate II, UCCE Imperial County

The objective of the study was to evaluate the efficacy of insecticidal materials for control of corn earworm (CEW) on sweet corn under desert growing conditions during the spring season. Sweet corn ‘Xtra-Tender 1278’ (Siegers Seed Company Holland, MI) was direct seeded on 25 Mar 2013 at the University of California Desert Research and Extension Center, Holtville, CA into single row beds on 40 inch centers. Stand establishment and crop maintenance was achieved using furrow irrigation. Plots were 2-beds wide (6.67 ft.) by 50 ft. long. Four replications of each treatment were arranged in a RCB design. Formulations and rates for each compound are provided in Table 1 along with the adjuvants used: RNA Activator 85 (RNA, San Joaquin, CA) or Hasten modified vegetable oil (Wilbur-Ellis Company, San Francisco, CA). The insecticide applications were made on dates indicated in Table 1, with a 6-nozzle, 2-bed boom, on a hand held CO₂ propelled sprayer, with 3 Conjet TXVS-4 nozzles per bed spaced 15 inches apart; outer 2 nozzles on 15 inch drops facing the plant angled 135° down from vertical delivering 11.2 gpa at 24 psi. Evaluation of insecticide efficacy against CEW was based on the number of live larvae and numbers of CEW damaged ears per twenty five randomly selected corn ears per plot and on the average length (cm) of CEW feeding damage per ear (the length of damage from the ear tip) on 11 June 2012. Data sets were analyzed using 2-way ANOVA and means separated by a protected LSD (P<0.05).

The CEW pressure was high for the spring sweet corn season. All of the insecticide treatments had significantly fewer CEW larvae and fewer CEW damaged ears than the untreated check (Table 1). The percentage of sweet corn ears damaged by CEW in the untreated check was significantly greater than the percentages of CEW damaged ears in any of the insecticide treatments. The percentages of CEW damaged ears for all of the insecticide treatments were above a level acceptable for commercial production.
### Table 1.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate Oz/acre</th>
<th>Application dates</th>
<th>Means of CEW Damage and Larvae per 25 Corn Ears</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>damaged ears$^2$</td>
</tr>
<tr>
<td>1. Untreated Check</td>
<td>------------</td>
<td>-------------------</td>
<td>17.00 a</td>
</tr>
<tr>
<td>2. Belt 480SC$^x$ r/w Baythroid XL$^x$</td>
<td>3.0</td>
<td>29 May, 3 Jun, 7 Jun 1 Jun, 5 Jun, 10 Jun</td>
<td>6.00 bc</td>
</tr>
<tr>
<td>3. Belt 480C$^l$ f/b Baythroid XL$^x$ f/b Radiant SC$^x$</td>
<td>3.0</td>
<td>29 May, 5 Jun 1 Jun, 7 Jun 3 Jun, 10 Jun</td>
<td>6.00 bc</td>
</tr>
<tr>
<td>4. Baythroid XL$^y$ r/w Lannate LV$^y$</td>
<td>2.8</td>
<td>29 May, 3 Jun, 7 Jun 1 Jun, 5 Jun, 10 Jun</td>
<td>4.25 c</td>
</tr>
<tr>
<td>5. Coragen SC$^y$ f/b Mustang EW$^y$ f/b Radiant SC$^y$</td>
<td>3.85</td>
<td>29 May, 3 Jun, 7 Jun 1 Jun, 5 Jun, 10 Jun</td>
<td>5.00 bc</td>
</tr>
<tr>
<td>6. Coragen SC$^y$ f/b Mustang EW$^y$ r/w Radiant SC$^y$</td>
<td>3.2</td>
<td>29 May, 5 Jun 1 Jun, 7 Jun 3 Jun, 10 Jun</td>
<td>6.25 bc</td>
</tr>
<tr>
<td>7. Paradigm VC$^y$ f/b Lannate LV$^y$</td>
<td>3.2</td>
<td>29 May, 3 Jun, 7 Jun 1 Jun, 5 Jun, 10 Jun</td>
<td>5.75 bc</td>
</tr>
<tr>
<td>8. Paradigm VC$^y$ f/b Lannate LV$^y$ f/b Radiant SC$^y$</td>
<td>3.2</td>
<td>29 May, 5 Jun 1 Jun, 7 Jun 3 Jun, 10 Jun</td>
<td>5.00 bc</td>
</tr>
<tr>
<td>9. Brigade 2EC$^y$ f/b Lannate LV$^y$</td>
<td>2.13</td>
<td>29 May, 3 Jun, 7 Jun 1 Jun, 5 Jun, 10 Jun</td>
<td>7.25 b</td>
</tr>
<tr>
<td>10. Brigade 2EC$^y$ f/b Lannate LV$^y$ f/b Radiant SC$^y$</td>
<td>2.13</td>
<td>29 May, 5 Jun 1 Jun, 7 Jun 3 Jun, 10 Jun</td>
<td>7.5 b</td>
</tr>
</tbody>
</table>

$^x$RNA Activator 85 at 0.25% vol/vol (5ml/2L).

$^y$Hasten modified vegetable oil at 0.5% vol/vol (10ml/2L)

Means within columns followed by the same letter are not significantly different, $P > 0.05$, LSD.

$^z$Log$_{10}$ (x+1) transformed data used for analysis but actual means reported in the table.
CIMIS REPORT AND UC DROUGHT RESOURCES

Khaled M. Bali, Irrigation & Water Mgmt Advisor, Director UCCE Imperial County
Sharon Sparks*, Imperial Irrigation District

California Irrigation Management Information System (CIMIS) is a statewide network operated by California Department of Water Resources. Estimates of the daily reference evapotranspiration (ET₀) for the period of March 1 to May 31 for three locations in the Imperial County are presented in Table 1. ET of a particular crop can be estimated by multiplying ET₀ by crop coefficients. For more information about ET and crop coefficients, contact the UC Imperial County Cooperative Extension Office (352-9474) or the IID, Ag Water Science Unit (339-9082). Please feel free to call us if you need additional weather information, or check the latest weather data on the worldwide web (Google CIMIS for the current link to CIMIS site).

Table 1. Estimates of daily Evapotranspiration (ET₀) in inches per day

<table>
<thead>
<tr>
<th>Station</th>
<th>March 1-15</th>
<th>March 15-31</th>
<th>April 1-15</th>
<th>April 16-30</th>
<th>May 1-15</th>
<th>May 16-31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calipatria</td>
<td>0.18</td>
<td>0.22</td>
<td>0.26</td>
<td>0.29</td>
<td>0.32</td>
<td>0.36</td>
</tr>
<tr>
<td>El Centro (Seeley)</td>
<td>0.16</td>
<td>0.20</td>
<td>0.24</td>
<td>0.28</td>
<td>0.31</td>
<td>0.34</td>
</tr>
<tr>
<td>Holtville (Meloland)</td>
<td>0.17</td>
<td>0.21</td>
<td>0.25</td>
<td>0.28</td>
<td>0.32</td>
<td>0.35</td>
</tr>
</tbody>
</table>

* Ag Water Science Unit, Imperial Irrigation District.

Water and Drought Online Seminar Series

The latest research-based advice on weathering a drought is now available free online. The UC Division of Agriculture and Natural Resources is working to help farmers cope with the unwelcome outcome of historically low rainfall the last three years. UC scientists, with support from the California Department of Water Resources, have recorded video presentations on high-priority drought webpages.

Each presentation is about one half hour in length and is available at the link below:

http://ciwr.ucanr.edu/

Then click on the drought resources link.
CropManage Workshop: Hands-on training

When: Wednesday April 15, 2015 (8:30 AM to 12 PM)
Where: University of California Desert Research & Extension Center
        1004 E. Holton Rd., Holtville, CA 92250.

Agenda
8:30 – 9:00  Registration and Refreshments
9:00 – 9:30  Introduction and update on CropManage
9:30-10:15  Getting started with CropManage
10:15       Break
10:30-11:15 Strategies for using CropManage for decision support and record keeping
11:15-11:45 Advanced features and interfacing sensors with CropManage
11:45-12:00 Discussion of new features or changes needed.

To keep the group size manageable so that we can provide individual help, we would like to limit the workshop to 30 participants. Please RSVP in advance by sending an email to kmbari@ucanr.edu with the subject heading “CropManage workshop” and let us know the number of participants in your group. We will email you a confirmation.

About the workshop: We will offer a hands-on training to learn in depth about the features of CropManage, a free online decision support tool for water and nutrient management. In addition to head and romaine lettuce, CropManage now supports broccoli, cauliflower, cabbage, and strawberries. Considering that the state-wide drought is continuing into a 4th year, and nutrient management continues to be linked to water quality regulations, efficiently using water and nitrogen fertilizer is a high priority for California growers. CropManage can play an important role in providing quick decision support on water and nutrient management on a field-by-field basis. This training will provide an opportunity to learn how to use CropManage for improving the efficiency of your farming operations or for adding value to your consulting services. We will provide in depth hands-on training so that you can learn step-by-step how to navigate and use CropManage for assisting with fertilizer and water management decisions and record keeping. Wi-Fi internet access is available at our conference room so please bring a laptop or tablet computer so that you can follow along as we tour through the features of the software. For additional information on the workshop, please contact Khaled Bali, kmbari@ucanr.edu or Mike Cahn, mdcahn@ucdavis.edu or visit the CropManage website: https://ucanr.edu/cropmanage

PENDING: Certified Crop Adviser CEU hours (1 hr soil and water management, 1 hr nutrient management, 0.5 hrs professional development).

Please feel free to contact us if you need special accommodations.

Sponsors:

UCCE – Imperial & Monterey Counties
California Department of Food and Agriculture - FREP
California Department of Water Resources
Please join us on the Agronomic Crops and Water Conservation field day to be held on **April 16, 2015**

Organized by
**University of California Cooperative Extension - Imperial County**

**Location:**
UC Desert Research & Extension (DREC)
1004 E Holton Road
Holtville, CA 92250

Detailed information and Agenda will be released sometime soon.

For further information, call (760) 352-9474 or email: Oli Bachie [obachie@ucanr.edu](mailto:obachie@ucanr.edu) or Khaled Bali [kmbali@ucanr.edu](mailto:kmbali@ucanr.edu)

Please feel free to contact us if you need more information about this upcoming event
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Inquiries regarding the University’s equal employment opportunity policies may be directed to Linda Marie Manton, Affirmative Action Contact, University of California, Davis, Agriculture and Natural Resources, One Shields Avenue, Davis, CA 95616, (530) 752-0495.