Comparison of alternative trap designs for stink bugs in sweet corn & apples in Ohio

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Traps for BMSB

• Still important in ‘fringe’ States!
• Lure now worked out by USDA
• But what about trap type?
  – Black pyramid is standard in fruit (but we do not like them!)
  – No clear standard in veg crops
Pyramids: black vs yellow
PVC pipe topped by Dead Inn: black vs yellow
PVC pipe topped by Dead Inn: black vs yellow plain vs netted
Also...
black drainage pipe w/ Dead Inn
& black stove pipe w/ Unitrap
Also in apple…
Dead Inn in tree
& vaned Unitrap in tree
Field trials 2013

• 4 weeks in August
• Trap types not replicated
  – 13 traps in corn
  – 9 traps in apples
• Locations shifted once per week
• Data taken 3 times per week
• All with ARS#20 + MDT lures
• Corn: 2 weeks in 1 early field, then 2 weeks in adjacent later field
BMSB adults in traps in corn, August 2013

- PVC pipe, yellow, screened: 80
- PVC pipe, black, no screen: 50
- Pyramid, black: 50
- PVC pipe, black, screened: 50
- Pyramid, yellow: 40
- PVC pipe, yellow, no screen: 30
- Stovepipe with Unitrap: 5

Total number caught in 4 weeks
BMSB nymphs in traps in corn, August 2013

- PVC pipe, yellow, screened: 837
- PVC pipe, black, no screen: 678
- PVC pipe, black, screened: 659
- Pyramid, black: 470
- Pyramid, yellow: 426
- PVC pipe, yellow, no screen: 389
- Stovepipe with Unitrap: 4

Total number caught in 4 weeks
<table>
<thead>
<tr>
<th>Trap Type</th>
<th>Total Number Captured</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC pipe, yellow, screened</td>
<td>58</td>
</tr>
<tr>
<td>PVC pipe, black, screened</td>
<td>52</td>
</tr>
<tr>
<td>PVC pipe, black, no screen</td>
<td>46</td>
</tr>
<tr>
<td>Drainage pipe</td>
<td>38</td>
</tr>
<tr>
<td>PVC pipe, yellow, no screen</td>
<td>23</td>
</tr>
<tr>
<td>In tree, Dead Inn</td>
<td>22</td>
</tr>
<tr>
<td>Pyramid, black</td>
<td>11</td>
</tr>
<tr>
<td>Stovepipe with Unitrap</td>
<td>7</td>
</tr>
<tr>
<td>In tree, Unitrap</td>
<td>3</td>
</tr>
</tbody>
</table>

Total number caught in 4 weeks
BMSB nymphs in traps in apples, August 2013

- PVC pipe, yellow, screened: 249
- PVC pipe, black, screened: 677
- PVC pipe, black, no screen: 339
- Drainage pipe: 391
- PVC pipe, yellow, no screen: 283
- In tree, Dead Inn: 278
- Pyramid, black: 208
- Stovepipe with Unitrap: 27
- In tree, Unitrap: 3

Total number caught in 4 weeks
Conclusions

- PVC pipe topped with Dead Inn performed well
- Netting increases catch, especially with nymphs
- Color (black vs yellow) not critical