MANUALS FOR THE SEED PRODUCTION OF SOME VEGETABLES IN THAILAND

BROCCOLI SEED INSECT CONTROL

Aphids – pirimicarb (Pirimor)

Soil-insects - prevent attack in the nursery by soil treatment with an insecticide - aldicarb (Temik).

Ceuthorrhynchus spp. (Cabbage weevil) - permethrin (Ambush). Do not spray during flowering time.

Vegetative Growth

- Worms
- Whiteflies
- Flea Beetles

Reproductive Growth

- Aphids
- False Chinch Bugs
- Lygus

Flea Beetles

Silverleaf Whitefly
New Chemistries on Vegetables

<table>
<thead>
<tr>
<th>Product</th>
<th>REI</th>
<th>PHI</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success 2SC</td>
<td>4 hrs</td>
<td>1 day</td>
<td>Air, Ground</td>
</tr>
<tr>
<td>Proclaim SG</td>
<td>48 hrs</td>
<td>7 days</td>
<td>Ground only</td>
</tr>
<tr>
<td>Avaunt WG</td>
<td>12 hrs</td>
<td>3 days</td>
<td>Air, Ground</td>
</tr>
<tr>
<td>Confirm 2F</td>
<td>4 hrs</td>
<td>7 days</td>
<td>Air, Ground</td>
</tr>
<tr>
<td>Intrepid 2F</td>
<td>4 hrs</td>
<td>1 day</td>
<td>Air, Ground</td>
</tr>
</tbody>
</table>
New Insecticide Chemistries
For Worm Control

- Reduced-risk compounds
- Environmentally friendly
- Selective Activity
- Unique modes of action
- Highly efficacious

Cabbage Looper on Broccoli - Fall 2002
1st Side dress

Mean Large Larvae / 10 plants

Fall 2002

Lygus Bug

Cabbage Aphid
Don’t waste your $$$

Expires 12/31/2004

Fulfill

Insecticide
For control of certain aphids in cotton, hay, pecans, potatoes (and other tuberous and corn vegetables), tobacco, and vegetables
Active ingredient: Pyrethrin (CAS No. 123132-89-0 . . . 50.0%)

Both compounds are Bee-safe

Pirimor 50DF
Assail 70WP
Actara WG
Fulfill WG
False Chinch Bug

Big-eyed Bug FCB

1 generation can be completed in 29 days

LENGTH OF LIFE CYCLE

At Garden City, during 1924, the average temperature being 79.75°F, the different stages from deposition of the egg to death of the resulting individual were determined as follows:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg stage</td>
<td>4</td>
</tr>
<tr>
<td>Viable stage</td>
<td>20</td>
</tr>
<tr>
<td>Mature to flehming</td>
<td>9</td>
</tr>
<tr>
<td>Beginning pre-feeding</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>49.55</td>
</tr>
</tbody>
</table>
10 False chinch bugs breed on weeds. Weeds that serve as host plants for these insects include: wild mustards and radish shepherds purse, london rocket spurge.

False Chinch Bug Suspected of Damaging Citrus Fruit

The ability of false chinch bugs to damage young citrus, pistachio and other fruit trees is fairly well documented. Their feeding can cause young trees to wilt and die.

Cultural Control:
Weed management is especially critical.

Chemical Control:
These insects are very difficult to manage. "They are inherently quite resistant to most insecticides."
Insecticides containing diazinon, permethrin, or chlorpyrifos, should be able to provide some control.
Capture® (5 oz) applied post-bloom, pre-harvest provided good FCB control