CABBAGE: *Brassica oleracea capitata* (L.), ‘Tobia’

CONTROL OF LEPIDOPTERA ON CABBAGE WITH INSECTICIDES, 2008

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Diamondback moth (DBM): *Plutella xylostella* (L.)  
Imported cabbageworm (ICW): *Pieris rapae* (L.)  
Cabbage looper (CL): *Trichoplusia ni* (Hübner)

This test is an ongoing effort to screen new insecticides against destructive lepidopteran pests on cruciferous vegetables. ‘Tobia’ cabbage was transplanted on 20 Jun at the Fruit and Vegetable Research Farm near Geneva, NY. Plots consisted of 2 adjacent rows: 1 border row and 1 treated row. Blocks consisted of nine 20 ft. rows to accommodate 3 treatments and 1 untreated check at 30-inch row spacing and 18-inch in-row spacing, and were replicated four times in a RCB design. A CO2 backpack sprayer was used for application of treatments with a one-row boom consisting of three nozzles per row (one nozzle over the top and one drop nozzle on each side) using TeeJet XR8002VS nozzles delivering 40 gpa at 40 psi and 2.7 mph. Treatments were applied once (21 Aug) at peak infestation. Silwet L-700, at 1% v/v, was added to the Alverde SC and Radiant SC treatments and Silwet L-77, at 1% v/v, was added to the Tesoro treatment. A single evaluation was made on 26 Aug by counting all live larvae of all 3 species on 3 plants in each plot. Data on insect pest densities were analyzed using GLM PROC in SPSS for Windows and Fisher’s protected LSD means separation test.

All the treatments significantly controlled DBM (*F*=7.535, *df*=3,12; *P*=0.004), ICW (*F*=10.268, *df*=3,12; *P*=0.001) and CL (*F*=7.213, *df*=3,12; *P*=0.005) in comparison with the untreated check (Table 1). In the cabbage field, DBM and ICW were the dominant lepidopteran species. In the check plots, populations were relatively high for DBM and ICW with 13.5 larvae and 11.0 larvae per 3 plants, respectively, but only 2.75 CL per 3 plants. The effect of Radiant SC, Tesoro 4EC and Alverde SC on control of DBM, ICW, and CL were not significantly different from each other.

<table>
<thead>
<tr>
<th>Treatment/Formulation</th>
<th>Rate</th>
<th>Ave. # of live larvae / 3 plants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rate</td>
<td>Ave. # of live larvae / 3 plants</td>
</tr>
<tr>
<td></td>
<td>amt/A</td>
<td>AI/A</td>
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<tr>
<td>Radiant SC</td>
<td>8.0 fl oz</td>
<td>0.0625 lb</td>
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<tr>
<td>Tesoro 4EC</td>
<td>6.4 fl oz</td>
<td>0.20 lb</td>
</tr>
<tr>
<td>Alverde SC</td>
<td>16 fl oz</td>
<td>0.25 lb</td>
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<tr>
<td>Check</td>
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</tbody>
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Means within a column followed by the same letter are not significantly different (Fisher’s Protected LSD, *P* = 0.05).