CABBAGE: *Brassica oleracea* var. *capitata* L., ‘Rinda’

INSECTICIDE CONTROL STRATEGY OF *THRIPS TABACI* ON CABBAGE, 2004

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Onion thrips: *Thrips tabaci* Lindeman

‘Rinda’ cabbage, a thrips-susceptible variety, was transplanted on 7 May in a commercial field near Geneva, NY. Plots consisted of 6 rows 20 ft in length and plots were bordered by an untreated row on each side. Blocks were replicated three times in an RCB design. The Admire treatment consisted of a single application of Admire applied 4 wks after transplanting on 6 June. Admire was applied with the side dressing of fertilizer. A CO2 backpack sprayer was used for application of Assail 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 30 gpa at 40 psi and 4 mph. Assail treatments were applied at 6, 7, 8, 11 and 12 wks after transplanting. Rain prevented applications during weeks 9 and 10. Harvest evaluations for thrips damage were made on 3 Aug by randomly selecting 12 heads per plot, cutting them in half along the core and peeling back 10 layers. Each layer was assessed for the presence of thrips damage. In addition, each head was rated on a qualitative scale from 0 (no injury) to 4 (severe injury). For this qualitative scale we included the number of layers damaged plus the amount of damage on each layer. To compare treatments, we used the average number of layers or damage rating per 12 heads in a replicate and then analyzed these averages using a two way ANOVA. Means were separated using Fisher’s Protected LSD ($P \leq 0.05$).

All treatments had significantly fewer layers damaged and lower mean damage ratings compared with the untreated control. Under both rating schemes, Admire plus Assail provided better control of thrips damage than either material alone. In previous years we have seen similar reductions (about 50%) in thrips damage when Admire was used as a side-dress. In 2003, our first year of testing Assail against thrips on cabbage, we saw a 50% reduction in damage when Assail was used at a rate of 1.7 oz/acre and a nearly 85% reduction when Assail was used at 3.4 oz/acre (presently a 2× legal rate). These results are promising and indicate that further testing of Assail alone or in combination with soil applications of Admire are warranted. No phytotoxicity was observed in any of the treatments. Compared to other years, this was considered a relatively mild year for thrips injury on cabbage due to the abundant rainfall.
<table>
<thead>
<tr>
<th>Treatment/formulation</th>
<th>Rate</th>
<th>Mean layers damaged</th>
<th>Mean damage rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>amt product/acre</td>
<td>lb (AI)/acre</td>
<td></td>
</tr>
<tr>
<td>Admire 2F + Assail 70WP</td>
<td>18 fl oz + 1.7 oz</td>
<td>0.13 + 0.07</td>
<td>1.1a 0.4a</td>
</tr>
<tr>
<td>Assail 70WP</td>
<td>1.7 oz 0.07</td>
<td>3.5b 1.2b</td>
<td></td>
</tr>
<tr>
<td>Admire 2F</td>
<td>18 fl oz 0.13</td>
<td>4.8c 1.5b</td>
<td></td>
</tr>
<tr>
<td>Untreated control</td>
<td>-- --</td>
<td>7.1d 2.5c</td>
<td></td>
</tr>
</tbody>
</table>

Means within a column followed by the same letter are not significantly different ($P > 0.05$, Fisher’s Protected LSD).