

Control of Lepidopterous Larvae in Fall Cabbage – 2008

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Promising new chemistry and labeled insecticides were evaluated for control of the cabbage insect complex. 'Blue Thunder' field-grown cabbage transplants were planted on July 25 at Papen Farms, Inc., Dover, DE. Plots consisted of one 20-ft-long row on 3-ft centers. Each treatment was replicated four times and arranged in a RCB design. The evaluated materials are listed in the tables. In furrow materials were applied at planting on July 25 using a CO₂ backpack sprayer with a one-nozzle boom delivering 15.2 gpa at 40 psi. All foliar materials were applied on Aug 5, 20 and Sept 4. Applications were made with a CO₂ backpack sprayer with a one-row boom, having 3 hollow-cone nozzles per row (one over the top and one drop nozzle on each side) delivering 52 gpa at 40 psi. The number of Lepidopterous larvae on each of 5 randomly selected plants per plot was recorded on a weekly basis from Aug 4 through September 22. The number of marketable heads was determined by examining feeding damage on the head and two wrapper leaves on September 30. Data were analyzed using Proc GLM and means were separated by Tukey's mean separation test (P=0.05).

Diamond back moth (DBM) population levels were low to moderate. All treatments provided a significantly higher percentage of marketable heads compared to the untreated controls. Overall, all treatments resulted in significantly lower numbers of Diamondback larvae compared to the untreated control. No phytotoxicity was observed.

Table 1.) Diamondback Moth (DBM) Counts and Marketable Heads

Treatment ¹	Rate/acre	Treatment Dates/Method	% Marketable Heads ¹ September 30	Mean Number DBM Larvae per 5 plants ¹				
				Aug 8	Aug 18	Sep 2	Sep 8	Sep 17
Synapse 24 WG + NIS	2 oz + NIS 0.25% v/v	Aug 5, 20; Sept4 Foliar	95.50ab	0.25b	0.00c	0.50ab	0.00c	0.75b
Synapse 24 WG + MSO	2 oz + MSO 0.25% v/v	Aug 5, 20; Sept4 Foliar	100.00a	0.00b	0.00c	0.00b	0.00c	0.50b
A15452	10.3 oz	July 24 – IF	95.25ab	0.25b	0.75bc	0.00b	0.25c	0.25b
A1542	13.0 oz	July 24- IF	91.75ab	0.25b	0.75bc	0.00b	0.25c	0.50b
Coragen	3.38 oz	Aug 5, 20; Sept4 Foliar	100.00ab	0.00b	0.50c	0.50ab	0.00c	0.75b
Coragen	5.07 oz	Aug 5, 20; Sept4 Foliar	98.25ab	0.00b	0.00c	0.25b	0.00c	0.50b
Rimon 0.83EC + LI 700	9 oz + LI 700 0.25% v/v	Aug 5, 20; Sept4 Foliar	98.25ab	0.25b	0.25c	0.00b	0.00c	0.25b
Alverde 2SC + LI 700	16 oz + 0.25% v/v	Aug 5, 20; Sept4 Foliar	83.25b	0.00b	2.50ab	1.50ab	1.75b	0.75b
Tesoro 4EC+ LI 700	6.4 oz + 0.25% v/v	Aug 5, 20; Sept4 Foliar	100.00a	0.00b	0.00c	0.75ab	0.00c	0.50b
Xentari + LI 700	1 lb+ 0.25% v/v	Aug 5, 20; Sept4 Foliar	89.75ab	0.00b	0.50c	0.75ab	0.25c	0.25b
Radiant 1SC	6 oz	Aug 5, 20; Sept4 Foliar	94.00ab	0.00b	0.25c	0.25b	0.00c	0.25b
Untreated Check	----	----	62.75c	2.00a	3.25a	2.25a	5.00a	4.25a

¹ Means within a column followed by the same letter are not significantly different (Tukey's, P=0.05).