

***Control of Lepidopterous Larvae in Fall Cabbage - 2004:*** Promising new chemistry and labeled insecticides were evaluated for control of the cabbage insect complex. 'Greencup' field-grown cabbage transplants were planted on July 24 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. All foliar materials were applied on July 30, Aug 6, 18, and 25, Sept 1 and 10. Applications were made with a CO<sub>2</sub> 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 38 gpa at 40 psi. Surfaid NIS was included in all applications at a rate of 0.25% vol./vol. The number of lepidopterous larvae on each of 5 randomly selected plants per plot was recorded on a weekly basis from July 27 through September 14. The numbers of marketable heads were determined by examining feeding damage on the head and two wrapper leaves on September 23. Data were analyzed using ANOVA and means were separated by Ryan's q-test (P=0.05). DBM populations were moderate. Although FAW populations were generally low, the feeding damage was concentrated in the tops of the head resulting in a lower % marketable head rating for the Assail, TD and Azadirect treatments. CL populations were low throughout the season and no differences were seen between the treatments and the untreated check. All treatments provided significantly better DBM control compared to the untreated check. All treatments provided a significantly higher percentage of marketable heads compared to the untreated check. No phytotoxicity was observed

Table 1 – Diamondback Moth (DBM) Counts

Treatment	Rate/A	% Marketable Heads	Mean Number DBM Larvae per 5 plants				
			Aug 11	Aug 16	Aug 23	Aug 30	Sep 6
Assail 70 WP	1.7 oz	73.99ab	1.50b	5.00bcd	1.25bc	1.00b	1.00b
TD 2472-01 30WSG	4 oz	59.44b	1.00b	6.75bc	3.00b	1.75b	0.00b
Proclaim 5SG	3.2 oz	95.56a	1.75b	3.75cd	0.50c	0.50b	0.25b
Proclaim 5 SG	4.8 oz	97.50a	0.00b	2.25cd	0.25c	0.00b	0.00b
Avaunt 30WG	3.5 oz	100.00a	1.25b	3.00cd	0.25c	0.00b	0.00b
Intrepid 2F	10 oz	51.60b	1.50b	9.00b	1.25bc	4.25b	3.50b
Spintor 2SC	4.5 oz	98.53a	1.00b	2.25cd	0.00c	0.25b	0.00b
Aza-direct	16 oz	70.90ab	2.00b	3.25cd	0.75bc	2.00b	2.25b
Azadirect	32 oz	76.36ab	1.00b	5.75bc	1.75bc	3.00b	2.75b
Novaluron 0.83EC	12 oz	98.53a	0.25b	1.00d	2.25bc	0.50b	0.00b
Novaluron 0.83EC	15 oz	100.00a	0.25b	0.75d	1.25bc	0.00b	0.00b
Untreated	-----	22.22c	7.75a	15.75a	6.50a	12.75a	15.00a

- All foliar sprays were applied with an NIS(Surfaid) at a rate of .25% V/V
- Means within a column followed by the same letter are not significantly different (Ryans's q-test, P=0.05).

Table 2 – Fall armyworm (FAW) counts

Treatment	Rate/A	Mean Number FAW larvae per 5 plants		
		Aug 30	Sept 6	Sept 14
Assail 70 WP	1.7 oz	2.50a	1.25a	1.00a
TD 2472-01 30WSG	4 oz	2.25ab	1.00a	0.50ab
Proclaim 5SG	3.2 oz	0.50abc	0.00a	0.00b
Proclaim 5 SG	4.8 oz	0.00c	0.00a	0.00b
Avaunt 30WG	3.5 oz	0.25bc	0.00a	0.00b
Intrepid 2F	10 oz	0.25bc	0.00a	0.00b
Spintor 2SC	4.5 oz	0.00c	0.00a	0.00b
Aza-direct	16 oz	1.00abc	0.50a	0.00b
Azadirect	32 oz	1.00abc	0.25a	0.00b
Novaluron 0.83EC	12 oz	0.50abc	0.00a	0.00b
Novaluron 0.83EC	15 oz	0.25bc	0.00a	0.00b
Untreated	-----	2.50a	1.25a	0.25ab

Means within a column followed by the same letter are not significantly different (Ryans's q-test, P=0.05).