

## EVALUATION OF FMC INSECTICIDE TREATMENTS IN CABBAGE 2007

David G. Riley and Alton “Stormy” Sparks Jr.  
University of Georgia, Tifton Campus  
Department of Entomology  
Tifton, GA 31793  
dgr@uga.edu

### **Introduction**

Cabbage, *Brassica oleracea* (L.) Capitata group (in this test ‘Platinum Dynasty’), is a key Brassica crop in Georgia. It is faced with multiple pests that attack the leaves, namely, diamondback moth (DBM); *Plutella xylostella*, cabbage looper (CL); *Trichoplusia ni*, and imported cabbage worm (ICW); *Pieris rapae*. This test evaluated numbered insecticide compounds from FMC, compared with Provado. The use of new chemistries and product rotations are critical for managing insecticide resistance in DBM.

### **Materials and Methods**

Cabbage was transplanted into 2 rows per 6-ft beds on 6 March 2007 and maintained with standard cultural practices at the Lang Farm, Georgia Coastal Plain Experiment Station at Tifton. A total of 500 lbs of 10-10-10 and 300 lbs of 34-0-0 were applied to Tift pebbly clay loam field plots and irrigation was applied regularly with an overhead sprinkler system. Scouting was conducted weekly from 3 April using two samples of 6 plants per plot. Foliar applications of insecticides were made on the following dates: 27 Mar, 3, 10, 17, 25 Apr and 1, 9, 16, 22 May. Plant heads were harvested from 10 ft of the center of the plot row on 4 June and heads with wrapper leaves were weighed and categorized as 0=not damaged, 1=slightly damage, 2=moderately damaged, 3=severely damaged by worms. Damage ratings >1 were not marketable cabbage heads. Data was analyzed using GLM and LSD tests for separation of means (SAS Institute 1990).

### **Results and Discussion**

All of the treatments except Provado were effective compared to the check in providing significant levels of control of Lepidoptera larvae, averaged over all dates. The best treatments for the control of Lepidoptera larvae were F6305 and Brigade followed by F2700 and F1785 based on season long averages. All of these treatments provided significant reductions in head damage and increased marketable yields compared to the untreated check.

Treatment - rate per acre	Diamond-back moth larvae 5/8/07	Total Lepidoptera larvae 5/8/07	Diamond-back moth larvae 5/15/07	Cabbage looper larvae 5/15/07	Total Lepidoptera larvae 5/15/07	Imported cabbage worms 5/22/07	Total Lepidoptera larvae 5/22/07
1. F6305 30 WG 0.11 lb ai/a	2.3 b	2.8 d	3.3 b	0.0 b	4.3 b	0.3 b	5.3 c
2. F1785 10 WP 0.088 lb ai/a	4.0 b	6.0 bc	3.3 b	1.0 ab	5.0 b	5.5 ab	15.0 abc
3. Brigade WSB 10WP 0.1 lb ai/a	3.0 b	3.0 d	3.5 b	0.3 b	4.0 b	0.3 b	7.8 c
4. F2700-04-1 0.83EC 0.025 lb ai/a	2.8 b	3.8 cd	4.0 b	0.0 b	5.3 b	0.3 b	1.0 bc
5. Provado 1.6 3.8 oz product/a	3.5 b	7.3 b	4.8 b	0.8 b	5.8 b	6.5 a	21.5 a
6. Untreated check	6.8 a	12.0 a	10.5 a	2.0 a	15.0 a	10.3 a	19.8 ab

- Means within columns followed by the same letter are not significantly different (LSD, P<0.05).

Treatment - rate per acre	Overall Cabbage looper	Overall Diamond-back moth	Imported cabbage worm	Leps total Overall	Wrapper Damage rating	Head Damage rating	Marketable Weight of Cabbage
1. F6305 30 WG 0.11 lb ai/a	0.06 b	1.69 b	0.19 b	1.94 c	1.23 de	0.28 c	48 a
2. F1785 10 WP 0.088 lb ai/a	0.67 a	1.97 b	0.86 b	3.50 bc	2.13 bc	0.95 b	34 ab
3. Brigade WSB 10WP 0.1 lb ai/a	0.08 b	1.89 b	0.08 b	2.06 c	1.00 e	0.23 c	45 a
4. F2700-04-1 0.83EC 0.025 lb ai/a	0.14 b	2.28 ab	0.31 b	2.72 bc	1.68 cd	0.73 bc	43 ab
5. Provado 1.6 3.8 oz product/a	0.78 a	2.97 ab	1.00 ab	4.75 ab	2.63 ab	1.75 a	24 bc
6. Untreated check	0.92 a	3.50 a	1.86 a	6.28 a	2.73 a	2.03 a	11c

\* Seasonal means within columns followed by the same letter are not significantly different (LSD, P<0.05).