

## EVALUATION OF INSECTICIDE TREATMENTS IN COLLARD - FALL 2006

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### **Introduction**

Collards, *Brassica oleracea* (L.) Acephala group (in this test 'Vates'), is the other main Brassica crop next to cabbage in Georgia. It is faced with similar multiple pests that attack the leaves each year, namely, diamondback moth (DBM); *Plutella xylostella*, cabbage looper (CL); *Trichoplusia ni*, imported cabbage worm (ICW); *Pieris rapae*, and cabbage webworm (CWW); *Hellula rogatalis* (Hulst). The test evaluated one of the manin Bt (*Bacillus thuringiensis*) products, Xentari, compared to other insecticides that have been used in this crop. The use of Bts and product rotations are critical for managing insecticide resistance in DBM.

### **Materials and Methods**

Collards was transplanted into 2 rows per 6-ft beds on 2 October 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 regularly with an overhead sprinkler system. Scouting was conducted weekly from 3 October to 12 December using two samples of 6 plants per plot. Foliar

applications of insecticides were made from 4 October to 22 November to reduce Lepidoteran pests. Plant tops were harvested from 10 ft of the center of the plot row on 12 December and plant tops were weighed and categorized as 0=not damaged, 1=slightly damage, 2=moderately damaged, 3=severely damaged by worms or contaminated by whitefly nymphs. Damage ratings >1 were not marketable collards. Data was analyzed using GLM and LSD tests for separation of means (SAS Institute 1990).

### **Results and Discussion**

All of the treatments except for the threshold treatment of the Xentari/Proclaim rotation provided excellent control of lepidoteran pests across all species encountered. However, I feel that even this last threshold rotation treatment, which provided intermediate control, would have performed better with a more frequent scouting interval than the once per week scouting used. There were no significant differences in terms of damage to the collards or in terms of total yield at the moderately low insect pressure experienced in this trial.

Treatment - rate per acre	Cabbage looper	Diamond-back moth	Imported cabbage	cabbage webworm	Leps total	Damage rating	Weight of Collards lbs/bunch
1. Untreated Check	0.38 a	0.2 a	1.15 a	0.19 a	1.91 a	0.25 a	2.40 a
2. Xentari DF 16 oz prod/a	0.03 b	0.03 b	0.24 c	0.01 bc	0.30 c	0.00 a	2.29 a
3. Spintor 2SC 6 oz prod/a	0.00 b	0.00 b	0.20 c	0.00 c	0.20 c	0.00 a	2.03 a
4. Proclaim 5 WDG 4.8 oz prod/a	0.01 b	0.01 b	0.35 c	0.03 bc	0.40 c	0.10 a	2.16 a
5. Xentari DF 16 oz prod/a alternate with Spintor 2SC 6 oz prod/a	0.00 b	0.01 b	0.33 c	0.00 c	0.34 c	0.05 a	2.29 a
6. Xentari DF 16 oz prod/a alternate with Spintor 2SC 6 oz prod/a on a threshold of 0.3/plant	0.01 b	0.00 b	0.30 c	0.09 abc	0.40 c	0.03 a	2.34 a
7. Xentari DF 16 oz prod/a alternate with Proclaim 5 WDG 4.8 oz prod/a	0.00 b	0.00 b	0.31 c	0.00 c	0.31 c	0.05 a	2.25 a
8. Xentari DF 16 oz prod/a alternate with Proclaim 5 WDG 4.8 oz prod/a on a threshold of 0.3/plant	0.06 b	0.03 b	0.75 b	0.11 ab	0.95 b	0.05 a	2.13 a

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