D
COLLARD: *Brassica oleracea* (L.) 'Georgia'
CONTROL OF DBM ON COLLARDS, 2004

P. A. Stansly and J. M. Conner
University of Florida/IFAS
Southwest Florida Res. and Ed. Center
2686 State Road 29 North
Immokalee, Florida 34142-9515
Phone: (239) 658-3427
Fax: (239) 658-3470
Email: pstansly@ufl.edu

Diamondback moth (DBM): *Plutella xylostella* (L.)

DBM is the most destructive pest of cole crops in Florida and the first to develop resistance to insecticides so new control options are always in demand. In this trial, we evaluated the potential of a chitinase inhibiting IGR against a standard rotation. Four beds 240 ft long on 27 ft centers and separated by a 15 ft drive and a double row of staked tomato were prepared by fumigating with 30 gal/acre of Telon C-35, laying a single drip-tape irrigation line with 12 inch emitter spacing and covering with a white-face polyethylene mulch. Greenhouse-grown collard seedlings were transplanted on 25 Feb in a single row at 18-inch spacing and fertigated with an 8-0-8 NPK mixture to provide a total of 150 lbs N and K/acre for the growing season. The 4 rows were considered as 4 replicates and divided into 5 plots 48 ft long with 30 plants each to which treatments were assigned in a RCB design. Plants (N = 10 per replicate) were evaluated on 8 Apr and treatments initiated after an average of 35 percent had DBM larva present. There were no significant differences in plots or replications, (LSD, $P<0.05$) from the precount. Three applications of Novalron at the 2 rates tested and SpinTor were made on 14, 27 April and 11 May. An additional treatment with Proclaim was made 4 May to the grower standard plots after pest pressure built during the 14 day interval between SpinTor

applications. A high clearance sprayer was used operating at 200 psi and delivered through two vertical booms, each fitted with 2 ceramic yellow Albuz® hollow cone nozzles plus an over head boom with 1 ceramic yellow Albuz® nozzle a total of 55 gpa. All treatments were tank mixed with the adjuvant Latron CS-7, a nonionic wetter/spreader, at 0.3 % v/v. Evaluations were made on 16, 23, 29 Apr and 10 and 17 May on the 6 top leaves from 8 randomly selected plants/plot, counting DBM larvae in 3 size categories: ≤⅓ inch long = small, >⅓ inch long = large and pupa. A quantitative damage rating was also made based on foliar damage where 0 = no damage, 1 = 1-3 holes per plant, 2= 4-10 holes per plant, 3 = 10-25 holes per plant, 4 = greater than 25 holes per plant.

Fewer DBM larvae and less damage were observed on all treated plants compared to untreated plants over the entire season. There was no deviation from this pattern except on 10 May when more damage was seen on plants treated with the grower standard of SpinTor and Proclaim than on plants treated with Novaluron. Our results demonstrated a role for Novaluron as an additional rotation partner with the present grower standards as a means of reducing selection pressure against any particular chemistry.

Florida Agricultural Experiment Station Journal Series No. N-02569

Treatment/ formulation	Rate amt/acre	Damage Rating		DBM (no. on upper 6 leaves) Mean 8 Plants over 5 dates			
		10 May	Mean 8 Plants over 5 dates	Small	Large	Pupa	Total
Novaluron 0.83 EC	12 fl oz	0.6c	0.30b	0.08b	0.11b	0.08b	0.27b
Novaluron 0.83 EC	14 fl oz	0.3c	0.18b	0.07b	0.14b	0.11b	0.31b
SpinTor 2 SC Proclaim 5 SG	4.0 fl oz 3.6 oz	1.3b	0.35b	0.09b	0.07b	0.12b	0.28b
Untreated check		4.4a	2.74a	1.23a	1.79a	1.53a	4.56a

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