

**Squash:** *Cucurbita maxima* Duch. ‘Autumn cup’

**CONTROL OF STRIPED CUCUMBER BEETLE IN MINNESOTA SQUASH, 2003**

**E.C. Burkness,**

**R.L. Koch &**

**W.D. Hutchison**

Department of Entomology

University of Minnesota

219 Hodson Hall

St. Paul, MN 55108

Phone: (612) 624-3670

Fax: (612) 625-5299

E-mail: burkn001@umn.edu

Striped cucumber beetle (SCB): *Acalymma vittatum* F.

‘Autumn cup’ was seeded 25 May in commercial fields of Pahl’s Farms Inc. in Rosemount, MN. Treatments were arranged in a RCB design with 4 replications. Plots consisted of 1 bed with 2 rows, 25 ft (7.6 m) long with 24 inch (1.02 m) row spacing within beds and 12 ft (3.66 m) between beds. Each replicate was separated by a 5 ft (1.52 m) alley. Treatment applications were made with a CO<sub>2</sub> pressurized backpack sprayer using a 3 ft boom with 2 nozzles (XR-Teejet 8002 flat fan, with no screen). The sprayer was calibrated to deliver 25 gpa (233.8 l/ha) at 35 psi (242 kPa). Treatments were applied on 23 and 30 Jun. Treatments were evaluated for SCB infestations 1 day after each application on 24 Jun and 1 Jul, respectively. All counts were taken from both rows of each plot. In each plot, 10 plants were sampled at random.

Preliminary SCB counts were taken 23 Jun and revealed a total of 32 SCB per 60 plants. Numerically, Sevin XLR Plus provided the most consistent control for each sample date. However, SCB counts 1 DAT for the first and second applications of insecticides indicated that no treatment provided significant control compared to the untreated check on either date. However, low densities of SCB and aggregated dispersal patterns may have led to high variability for insect counts, which may have masked treatment effects. No phytotoxicity was observed.

Treatment/formulation	Rate (lbs AI / ac or product / ac)	Mean SCB / 10 plants	
		23 Jun (1 DAT) <sup>1</sup>	1 Jul (1 DAT) <sup>2</sup>
Sevin XLR Plus 4F	1.0	0.75	0.33
SpinTor 2SC	0.125	3.25	2.67
Entrust 80WP	0.125	3.75	4.33
Pyganic EC 1.4	32 oz	1.75	1.67
EverGreen EC 60-6	7.5 oz	2.50	0.67
X-5674-03	112 oz	2.00	0.33
Ecozin 3% EC	10 oz	4.25	1.33
Pyganic EC 1.4 / Ecozin 3% EC	32 oz / 10 oz	3.25	0.67
EverGreen EC 60-6 / Ecozin 3% EC	7.5 oz / 10 oz	5.25	1.67
X-5674-03 / Ecozin 3% EC	112 oz / 10 oz	3.50	1.33
Untreated check	--	3.50	5.00
		NS	NS

Means within columns followed by the same letter are not significantly different ( $P=0.05$ ); Protected least significant difference test (LSD). NS = not significant ANOVA.

<sup>1</sup> The 23 Jun sample date was 1 day after the first application of insecticide treatments.

<sup>2</sup> The 1 Jul sample date was 1 day after the second application of insecticide treatments.

## **Part II. Materials Tested for Arthropod Management**

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Sevin XLR Plus 4F, (1-naphthyl N-methylcarbamate), carbamate, Bayer CropScience

SpinTor 2SC, (2((6-Deoxy-2,3,4-tri-O-methyl-a-L-mannopyronaosyl)oxy)-13-((5-

(dimethylamino)tetrahydro-6-methyl-2H-pyran-2-yl)oxy)-9-ethyl

2,3,2a,5a,5b,6,9,10,11,12,13,14,16a,16b-tetradecahydro-14-methyl-1H-as-indaceno(3,2,-  
d)oxacyclododecin-7,15-dione), spinosad, Dow AgroSciences

Entrust 80WP, spinosad, Dow AgroSciences

Pyganic EC 1.4, pyrethrins, MGK Company

EverGreen EC 60-6, pyrethrins and piperonyl butoxide, MGK Company

X-5674-03, pyrethrins, MGK Company

Ecozin 3% EC, azadirachtin, Amvac Chemical Corporation