(C8)

GRAPE: *Vitis labrusca* L., 'Concord'

CONTROL OF GRAPE LEAFHOPPER AND GRAPE BERRY MOTH, 2000

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Grape berry moth (GBM): *Endopiza viteana* Clemens
Eastern grape leafhopper (GLH): *Erythroneura comes* (Say)

Insecticides were applied to mature (19-yr-old) cultivar 'Concord' grape vines at the Trevor Nichols Research Complex near Fennville, MI, at a rate of 50 gpa using a FMC 1029 airblast sprayer. Soil applications were made at a rate of 94 gpa with a single nozzle boom sprayer, as a directed spray to the 2-ft herbicide strip under the vine. Treatments were arranged in a CR design of single 42-ft long rows of vines replicated four times. Applications of materials were made on 28 Apr (Soil applications), 15 Jun (2C), 29 Jun (3C), 12 Jul (4C), 28 Jul (5C), 15 Aug (6C, Threshold), 1 Sep (7C), and 15 Sep (8C). Grape leafhopper evaluations were made on 11 Jul and 1 Aug by randomly selecting 50 leaves per replicate, and examining them for presence of GLH nymphs. GBM evaluations were made on 3 Aug and 24 Aug by examining 25 clusters per replicate for GMB damage. Harvest fruit evaluations were made on 25 Sep by randomly harvesting 25 grape clusters per replicate, and examining clusters for GBM damage.

All treatments provided control of GLH by the 1 Aug rating, although populations were too low to show further separation between compounds (Table 1). One exception was that a single application of Surround did not maintain as good a control as the Surround treatment with multiple applications. All treatments except Valero provided significant control of GBM as compared with the untreated check (Table 2). Mycotrol and Surround treatments did not give commercial levels of control, even with repeated applications. The combination of Dipel and Ecozin resulted in higher GBM damage than either compound alone.

Table1

Treatment/formulation	Rate amt/acre	Timing	% leaves infested with GLH nymphs 11 Jul	01 Aug
Admire 2F 8176	32.0 oz	Soil application	0.5 bc	0.0 c
Platinum 2SC	12.8 oz	Soil application	0.5 bc	1.0 bc
Actara 25WG	2.75 oz	2C	0.0 c	0.5 c
Pyramite 60W	8.8 oz	4C	0.0 c	0.5 c
Provado 1.6F	6.0 oz	2C	0.0 c	0.5 c
Esteem .86EC + Latron B-1956	16.0 oz 0.06 gal	2C,5C,7C	0.5 bc	0.0 c
Agri-Mek 1.5EC + SUN UFO	20.0 oz 0.5 gal	3C	0.5 bc	0.5 c
Sugar Esters	0.3 gal	4C,6C,8C	4.5 a	1.0 bc
Ecozin 3 EC + Sylgard 309	10.0 oz 4.0 oz	2C,3C,5C,6C,7C,8C	0.5 bc	1.5 bc
Capsyn	0.5 gal	2C,3C,5C,6C,7C,8C	1.0 bc	0.0 c
Valero 30 LC	1.0 gal	4C,6C,8C	2.0 b	0.0 c
Danitol 2.4 EC	10.7 oz	2C-8C	0.0 c	0.0 c
Imidan 70 W	1.5 lb	2C-8C	0.0 c	0.0 c
Guthion 50 W	1.5 lb	2C-8C	0.0 c	0.0 c
Lannate 90 SP	1.0 lb	2C-8C	0.0 c	0.0 c
Sevin XLR	2.0 qt	2C-8C	0.0 c	0.0 c
Surround WP	25.0 lb	2C-8C	0.0 c	0.0 c
Surround WP	25.0 lb	3C	0.0 c	2.5 b
Untreated check			2.0 b	5.0 a

Means followed by same letter in a column do not significantly differ ($P = 0.05$, LSD).

Table 2

Treatment/ formulation	Rate amt/acre	Timing	% clusters damaged by GBM 24 Aug	25 Sep
Esteem .86EC + Latron B-1956	16.0 oz 0.06 gal	2C,5C,7C	1.0 b	2.0 ef
Intrepid 2 F + Latron B1956	4 oz 0.06 gal	2C,5C,6C,7C,8C	5.0 ab	3.0 ef
Confirm 2 F + Latron B1956	16 oz 0.06 gal	2C,5C,6C,7C,8C	2.0 b	3.0 ef
Dipel DF + Sylgard 309	1.5 lb 4.0 oz	2C,3C,5C,6C,7C,8C	2.0 b	2.0 ef
Dipel DF + Sylgard 309 Ecozin 3 EC +	1.5 lb 4.0 oz 10.0 oz	2C,3C,5C,6C,7C,8C	2.0 b	16.0 bcd
Ecozin 3 EC + Sylgard 309	10.0 oz 4.0 oz	2C,3C,5C,6C,7C,8C	6.0 ab	7.7 def
Mycotrol ES + Sylgard 309	1.0 qt 4.0 oz	2C,3C,5C,6C,7C,8C	0.0 b	20.0 bc
Capsyn	0.5 gal	2C,3C,5C,6C,7C,8C	1.0 b	9.5 c-f
Valero 30 LC	1.0 gal	4C,6C,8C	1.0 b	24.0 ab
Danitol 2.4EC	10.7 oz	2C-8C	0.0 b	0.0 f
Imidan 70 W	1.5 lb	2C-8C	1.0 b	0.0 f
Guthion 50 W	1.5 lb	2C-8C	3.0 b	0.0 f
Lannate 90 SP	1.0 lb	2C-8C	2.0 b	0.0 f
Sevin XLR	2.0 qt	2C-8C	3.0 b	2.0 ef
Surround WP	25.0 lb	2C-8C	2.0 b	13.0 b-e
Untreated check			11.0 a	32.0 a

Means followed by same letter in a column do not significantly differ ($P = 0.05$, LSD)