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Curative Control of Hairy Chinch Bugs in Lawn Turf, 2013*

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Bluegrass | *Poa* spp

hairy chinch bug | *Blissus leucopterus hirtus*

Chromobacterium; subtsugae; strain PRAA4– -1T and spent; fermentation media; (S)-Cyano(3-phenoxyphenyl)methyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; 2-Methyl-3-biphenylyl)methyl (1S,3S)-3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propen-1-yl]-2,2-dimethylcyclopropanecarboxylate; a(p-nonyphenyl)-w-hydroxypoly; (oxyethylene); Poly (methylene p-nonylphenoxypolyoxypropylene propanol); Alkyl (C18-20) Fatty Acids

This study was conducted to evaluate various insecticides for curative control of HCB compared with industry standards. The test was conducted in a home lawn located in Centerville, Ohio. Treatments were applied 11 Jul to plots 5×5 ft arranged in a RCB design, with three replicates and no separation between plots. Liquid insecticide applications were made using a 3-ft wide CO_2 pressurized sprayer with TeeJet 8004 nozzles at 20 psi calibrated to deliver 2.0 gal/1000 ft^2. Granular insecticide applications were made using a shaker jar. A non-ionic surfactant was added to the Grandevo treatments (0.25 %vol/vol). Field conditions at time of 11 Jul applications were: turf 90% Kentucky bluegrass, 10% tall fescue, mowed at 3.0 inch, thatch-0-1/4 inch; soil clay loam-rubble, slightly moist, moderate slope to north and west, 76°F at 1 inch, 75°F at 3 inches; weather air temp 79°F, mostly sunny, 3–5 mph wind from north northeast; pests numerous HCB adults and early instar nymphs were observed upon sampling in test area. Efficacy data were obtained 18 and 25 Jul (7 and 14 DAT) and 9 Aug (29 DAT) by collecting all stages of HCB that floated to the top of a 5-inch stainless steel cylinder driven into each plot. Biased samples were taken by placing cylinders where HCB were found. If no insect were found after four attempts, the cylinders were placed randomly in the plot where green turf was present. The cylinders were then filled with water and the HCB removed with a paint brush and placed into ethanol during 4-min periods until no further bugs floated to the surface. ANOVA was performed on untransformed total number of insects per plot and means separated by LSD at $\alpha = 0.05$, where appropriate (Table 1). At each sampling date, Talstar Xtra was the only treatment to effectively reduce HCB numbers (>90%), although, other treatments were significantly different than the untreated control. Untreated checks averaged 200.0, 265.9, and 272.7 total HCB/ft^2 at 7, 14, and 29 DAT, respectively, which are considered to be moderately high densities. No phytotoxicity was observed after any of the treatments.

Table 1

Treatment/formulation	Rate amt/acre	Avg/ft^2 [a] 7 DAT 18 Jul	% control	Avg/ft^2 [a] 14 DAT 25 Jul	% control	Avg/ft^2 [a] 29 DAT 9 Aug	% control
Grandevo PTO + NIS	10.9 lb	36.4	81.8	72.7	72.6	79.5	70.8
Grandevo PTO + NIS	4.1 lb	113.6	43.2	84.1	68.4	197.7	27.5
Grandevo PTO + NIS	2.0 lb	120.5	39.8	47.7	82.1	172.7	36.7
Talstar Xtra	2.3 lb	2.3	98.9	2.3	99.1	2.3	99.2
Check	–	200.0	–	265.9	–	272.7	–

[a]Combined chinch bug nymphs+adults untransformed counts analyzed by ANOVA ($P = 0.087$, ≤ 0.001 and ≤ 0.036), respectively, and means followed by the same letter in a column are not significantly different by LSD at $\alpha > 0.05$.

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