

Evaluation of Products for Control of Japanese Beetle Grubs

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INTRODUCTION

A few insecticides are currently registered and labeled for use in turfgrass to control a number of different white grub (i.e., larvae) species. A new chemistry, thiamethoxam (Meridian) is currently pending EPA registration. Some products are preventative (i.e., to be applied before pest presence) and others are curative (i.e., applied after pest is observed) control products. Variables such as timing, rate of application, and formulation of product can affect performance or efficacy (i.e., control). Consequently, the objective of this study was to determine the effectiveness of several white grub control products applied at different timings, rates, and formulations.

MATERIALS AND METHODS

Design: RCB, 4 replications of three commercially available control products
Pesticide Application Dates: Preventative; May 4 and July 19, 2000, Early Curative; August 11, 2000
Application Method: CO₂ Backpack sprayer equipped with TeeJet TJ60-11010VS nozzles. ALL treatments were irrigated with inch of water immediately following application.
Data Collection: October 9, 2000

RESULTS AND DISCUSSION

May 4, 2000 PREVENTATIVE TREATMENT

Chemical Name	Trade Name	Formulation	Rate	Mean # Grubs/ft ²	% Control
Thiomethoxam	Meridian	25 WG	0.2 lb ai/A	3.3	83.4
Thiomethoxam	Meridian	25 WG	0.26 lb ai/A	2.5	88.9
Imidacloprid	Merit	75 WP	0.3 lb ai/A	0.3	98.7

July 19, 2000 CURATIVE TREATMENT

Chemical Name	Trade Name	Formulation	Rate	Mean # Grubs/ft ²	% Control
Thiamethoxam	Meridian	25 WG	0.2 lb ai/A	0.0	100

August 11, 2000 CURATIVE TREATMENT

Chemical Name	Trade Name	Formulation	Rate	Mean # Grubs/ft ²	% Control
Thiamethoxam	Meridian	25 WG	0.2 lb ai/A	0.0	100
Thiamethoxam	Meridian	25 WG	0.23 lb ai/A	0.0	100
Thiamethoxam	Meridian	25 WG	0.26 lb ai/A	0.0	100
Trichlorfon	Dylox	80 WP	8.0 lb ai/A	1.8	89.3

The findings from this study revealed that all control products evaluated provided excellent control of Japanese beetle grubs when applied as a preventative or early curative. However, since a late-season curative application was not tested, these data should not be interpreted and/or imply that they are effective late-season curative control products.