Efficacy of Micro-Infusion Imidacloprid on Red Gum Lerp Psyllid

Mauget Imicide® Provides Control and Long Residual

Research Facility & Trial Location

Lester Young from California Polytechnic University evaluated the effect of imidacloprid insecticide in a completely enclosed micro-infusion system (Mauget Imicide®) on eucalyptus trees in California infested with red gum lerp psyllids.

Objectives

The red gum lerp psyllid nymph forms a protective sugary covering (lerp) that prevents foliar sprayed pesticides from making contact. This study assessed the ability of a systemic, trunk-infused method of applying imidacloprid to control red gum lerp psyllid nymphs.

Materials & Methods

Twenty trees were randomly selected from a stand of heavily infested red gum eucalyptus trees lining a golf course, and assigned to one of two treatment groups: Imicide or untreated control. Trees were treated in July using the commercial pre-measured Mauget capsules containing 3 ml of 10% imidacloprid. Following treatment, 10 leaves were randomly sampled from each tree weekly for three months, and then monthly for another 12 months. The number of live red gum lerp psyllid nymphs was counted.

Findings

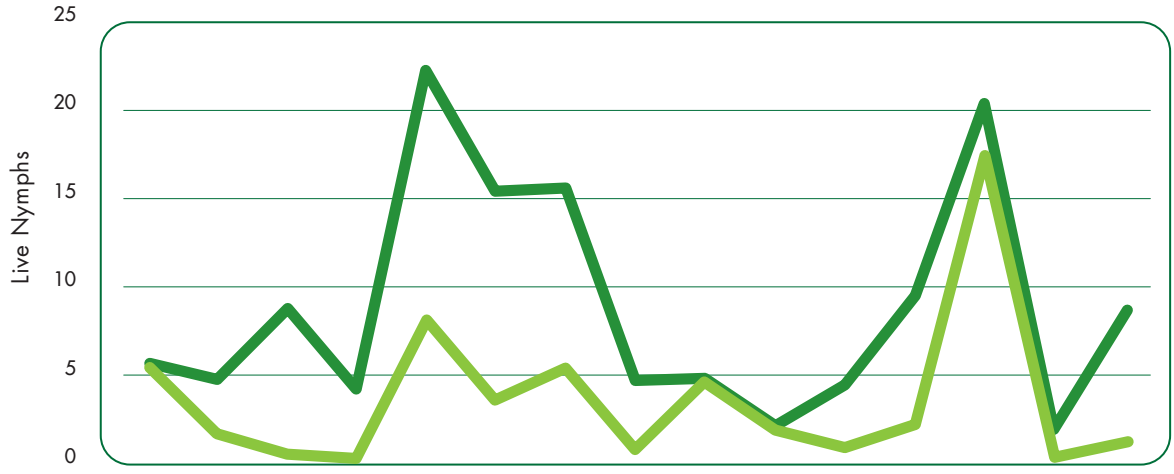
Significant Effect Over Eight Months
Imicide-treated trees had significantly lower red gum lerp psyllids than untreated trees for eight months (Figure 1). Compared to controls, the reduction of nymphs with Imicide was 81% over three months, 73% over eight months, and 41% over 15 months.

Long Residual in Some Trees
Some trees had longer residual activity than others (up to 15 months), which indicated possible differences among individual trees sustaining levels of imidacloprid beyond eight months. The researchers theorized that these differences may be due to several factors that may interfere with material uptake, including tree health, age, root and crown structure, crowding, and the degree of nutrient or water stress.

Conclusions
Mauget Imicide significantly reduced red gum lerp psyllid nymphs for eight months, with an even longer residual effect in some trees. Because the red gum lerp psyllid is readily able to reinfest trees, longer residual pesticides such as Imicide have a distinct advantage over short residual products for controlling red gum lerp psyllid infestations.

Figure 1

Monthly Means of Live Red Gum Lerp Psyllid Nymphs



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Untreated	5.62	4.70[a]	8.32[a]	4.22[a]	22.10[a]	15.55[a]	15.82[a]	4.44[a]	4.69	2.64	4.36	9.75	20.30	2.60	7.41[a]
Imicide	5.42	2.28[b]	0.49[b]	0.43[b]	7.13[b]	3.93[b]	5.35[b]	0.91[b]	4.64	2.38	1.32	2.70	17.40	0.58	1.63[b]

[a b] Numbers in same column with different letters differ significantly at the 5% level.

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For more information or the full report of this study, call **800-TREES-Rx (800-873-3779)** or visit **www.mauget.com.**

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