

# Emaject®



Home Gardener 200mL



Commercial Pack 1 Litre



Commercial Pack 2 Litre

Ema-ject® is the only tree injectable form of emamectin benzoate in Australia. It is a completely novel water-soluble chemistry line unlike any other registered internationally.

International studies have shown that Emamectin Benzoate is effective in controlling a broader range of insect pests than neonicotinyls.

Ema-ject® has high water solubility and systemicity, it translocates quickly throughout the canopy offering long term protection on labelled insect pests. Ema-ject® when trunk injected offers a superior environmental alternative to comparative registered products.

There are no restrictions of use in River Red Gum (*Eucalyptus Camaldulensis*). Treatment can still be undertaken even when the trees are in flower. This is a significant formulation advancement in tree injectable technology. Independent studies have shown that no detectable floral residues were found in buds, nectar, and pollen in multiple eucalyptus species. Whereas the comparative product was present at lethal levels to pollinators in residue tests. The APVMA, the national regulator, is satisfied that Ema-ject® when used as per label presents a minimal risk to the environment.

Ema-ject® was invented and developed in Australia by Environmental Tree Technologies, a wholly Australian owned company.

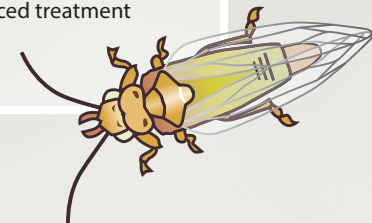
#### The Ema-ject label includes:

- Elm Leaf Beetle, all susceptible elm species.
- River Red Gum for Lerp infestation.
- Platanus species "Plane Trees" for Sycamore Lacebug.
- Further label additions & amendments pending.

Off label Permits issued as pests present.

## Features & Advantages

- ✓ Emamectin Benzoate is a bio-pesticide derived from *Streptomyces Avermitilis*.
- ✓ Ema-ject® is a new and novel water-soluble formulation of emamectin benzoate.
- ✓ Invented, developed, and formulated entirely within Australia.
- ✓ A 100% Australian owned company.
- ✓ No detectable residues, in buds, pollen, and nectar in multiple eucalyptus species.
- ✓ Environmentally safer, presents a low risk to pollinating insects such as bees.
- ✓ A different class of chemistry, and a safer alternative to neonicotinoids.
- ✓ Offers a broader spectrum of control compared to neonicotinoids.
- ✓ No resistance issues in target insect pests.
- ✓ Requires eight times less active ingredient than comparative products with equal or better control.
- ✓ One treatment offers long term persistent control on labelled insect pests.
- ✓ Low-viscosity, won't clog up injecting equipment and devices.
- ✓ Rapid systemic uptake within the xylem with phloem activity detected.
- ✓ Free flowing, won't precipitate out in the xylem at the injection points.
- ✓ Wider injection spacings, requiring less plugs, ensuring reduced treatment time and costs.



## PRODUCT PROFILE

**Active constituent:** 15 g/L Emamectin Benzoate

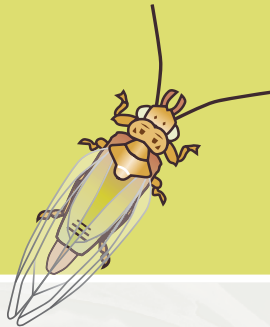
**Chemical group:** Macrocylic Lactone

**Activity group:** Group 6 Insecticide

**Formulation type:** Ready to use

**Pack sizes available:** 200 mL, 1 L, 2 L

**APVMA Approval No:** 88692/121997



## Application Rate

2.6 – 5 mL per hole with 20 cm spacing between holes

3.3 – 6.3 mL per hole with 25 cm spacing between holes

Use tree injection devices to apply the chemical. Hole spacing should be 20 cm to 25 cm apart depending on the height of the tree.

Use higher rate when pest infestation is high.

Avoid application beneath areas of rot, wounding or other areas where vertical systemic uptake may be blocked within the tree. Where possible inject directly in line beneath branches or limbs.

## General Instructions

No dilution is required; this product is intended to be applied undiluted directly into the trunk or branches of trees in order to provide systemic control of insect pests.

Ema-ject® can be used as directed on ornamental trees in residential areas, business and office complexes, shopping complexes, golf courses, airports, cemeteries, parks, playgrounds, and athletic fields. Ema-ject® can be used in commercial forestry production, nurseries, greenhouses, and in state, federal, and local recreational forests.

## FAQs

### Why is Ema-ject different to other products?

Ema-ject was invented and developed by an industry leading tree injection specialist. It is a different class of chemistry that has no resistance issues as seen with neonicotinoids. The formulation was designed to better suit injecting devices. Wider injection spacings, free flowing and faster application.

### Is it easy to trunk inject trees?

Dedicated tree injection devices or syringes are necessary for effective delivery and use this product. Trunk injection requires a level of attention and care to ensure that the process is carried out properly. Home gardeners can undertake the process with a strict adherence to safety as specified on the label.

It is recommended that trained horticulturalists, arborists or otherwise experienced or qualified persons perform the treatment with this product on commercial projects.

### How long does it take to inject a large tree?

The speed of the process depends on the device or equipment used; a level of expertise is required when carrying out the procedure. For example, a large tree with a diameter of 100 cm may take as little as 3 minutes to inject or longer, usually its seasonal or species dependant.

### How many trees can an applicator inject in a day?

On commercial projects one applicator can typically inject 100 or more trees per day, device, species, and size dependant.

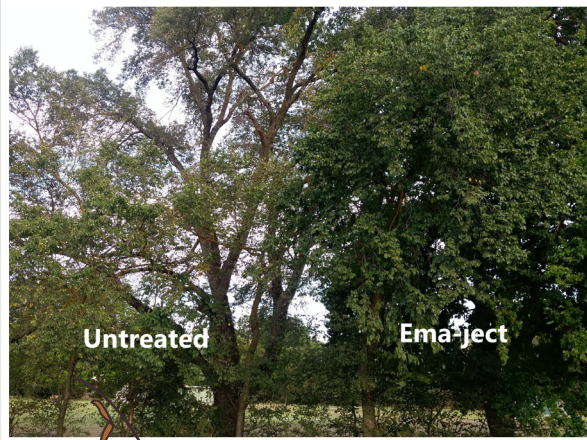
### How will trunk injection protect the tree?

The active ingredient in Ema-ject is emamectin benzoate, once injected its systemically translocates within the tree vascular system to the leaves.

### How long does a treatment with Ema-ject protect the tree?

Trials with elm trees have shown that a single treatment of Ema-ject can control insect numbers for a period of 3 years. Evidence in other species indicates that extended protection could be expected.

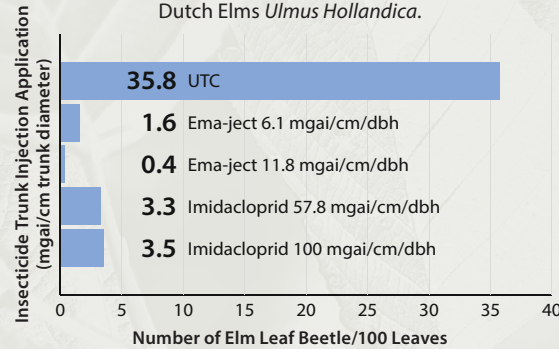




Left: Elm leaf Beetle Untreated  
Right: Trunk injected with Ema-ject.

### ELM LEAF BEETLE (*Xanthogaleruca luteola*)

Levels and Effects of Ema-ject® (Emamectin Benzoate 15g/L) and Imidacloprid (APVMA Registered Product) and its impact on Elm Leaf Beetle Larvae in Dutch Elms *Ulmus Hollandica*.

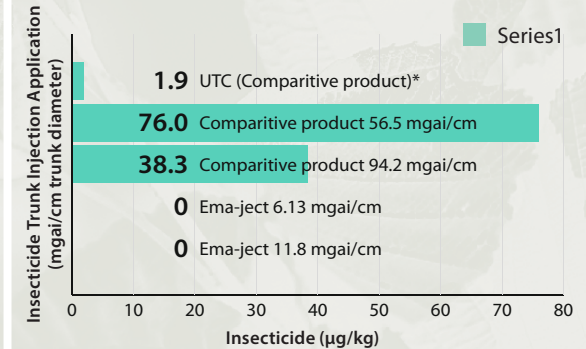


Trunk injected October 7th 2018. Assessment February 19th 2019-135 DAT.  
Source: APVMA Submitted Data

### RED BOX POLLEN RESIDUES

Note: UTC Trees Cross Contaminated by Pollinators

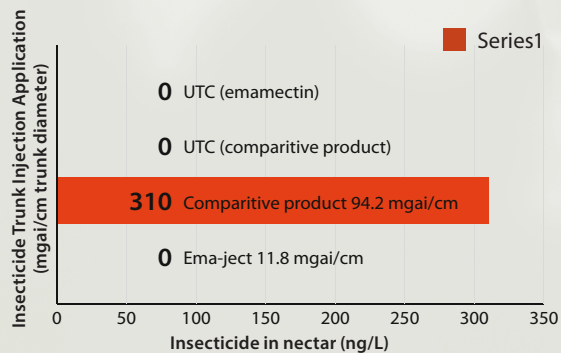
Levels of comparative product & Ema-ject® (Emamectin Benzoate 15g/L). Applications in Red Box *Eucalyptus Polyanthemus* flower stamens bearing pollen.



\*UTC Trees were cross contaminated by pollinators.  
Trees treated April 15th 2019. Stamens & Pollen Sampled October 23rd 2019.  
Source: APVMA Submitted Data

### YELLOW BOX NECTAR RESIDUES

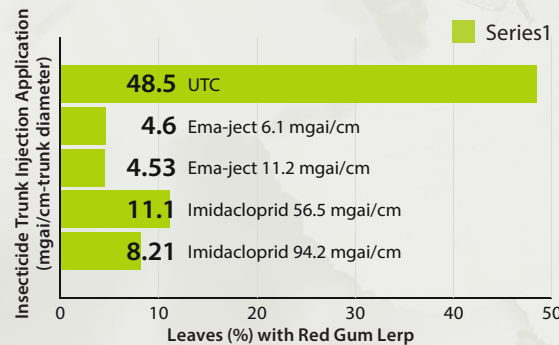
Levels of comparative product (APVMA Registered) & Ema-ject® (Emamectin Benzoate 15g/L). Results from diluted *Eucalyptus Melliodora* flower nectar.



Trunk injected October 5th 2018. Nectar Sampled November-December 2018.  
Source: APVMA Submitted Data

### RED GUM LERP (*Glycaspis brimblecombei*)

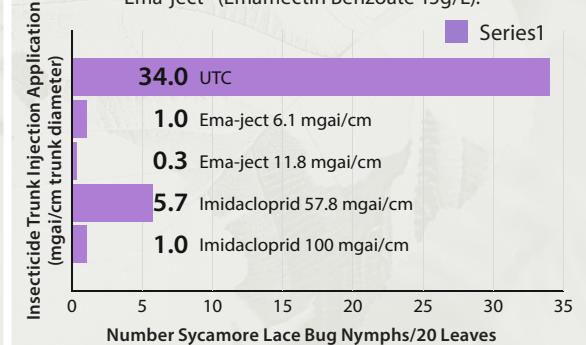
Comparison of Imidacloprid (APVMA Registered Product) & Ema-ject® (Emamectin Benzoate 15g/L) on Red Gum Lerp Psyllid (RGLP) on River Red Gum *Eucalyptus Camaldulensis*.



Trunk injected February 2018. Assessment May 2018-72 DAT.  
Source: APVMA Submitted Data

### SYCAMORE LACE BUG (*Corythucha ciliata*) - LONDON PLANE TREES

Effects of treatments on Sycamore Lace Bug (SLB) nymphs in London Plane Trees *Platanus Acerifolia*. Treated with Imidacloprid (APVMA Registered Product) & Ema-ject® (Emamectin Benzoate 15g/L).



Trunk injected November 10th 2018. Assessment April 6th 2019-147 DAT.  
Source: APVMA Submitted Data