



The ultimate in stem protection

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A new generation pruning wound dressing incorporating a tough, rubber-like acrylic resin, powerful fungicides and bactericide for excellent disease control.

Introduction

With the increased pressure from fungal and bacterial attack in the current climate, proper attention to the pruning process is vital to overall orchard health. The sustainability of apple, stone fruit, kiwifruit, grapes, olives and ornamental trees is often determined by fungal pathogens which enter via pruning wounds and cause Silverleaf (apples/pears/stonefruit), stem cankering (apples/pears), shoot stunting and dieback (grape vines), stem/trunk rots and swollen stem (kiwifruit), bacterial stem knot (olives) and silverleaf/stem/trunk rots (ornamental species).

The purpose of a wound dressing is to provide short term protection for up to 3 months to enable the plant time to form a defence zone just below the wound surface.

Greenseal Ultra™ is a specially formulated blend of acrylic polymers, binders, fungicides and bactericide. The ingredients are active against a range of fungi and bacteria which colonise wood including *Chondrostereum*, *Eutypa* and white rot basidiomycetes, as well as *Neonectria* and bacteria. The tough acrylic resin encourages callusing to ensure rapid wound closure.

Key factors for effective wound protection with Greenseal ULTRA

- **Prune on suitable days.** Sunshine and low humidity conditions are ideal for rapid drying of the wound dressing and minimal post cut inoculum buildup. Avoid applying in damp conditions.
- **Apply Greenseal ULTRA on the same day as pruning.** Humidity rises at night and spore release may occur infecting untreated wounds.
- **Apply generously.** Apply a thick, even coat of Greenseal ULTRA, right to the edge of the wound to get the best protection. Most bacterial and fungal infections of wood are most active in the wet winter period.
- **All wounds** that require secateurs to remove branches require dressing with Greenseal ULTRA.
- **Main Stem.** Pay extra attention to any pruning wounds made on the main stem. This is a vital part of the tree and may be the basis for a new canopy or a grafting opportunity.
- **Copper/ Paint.** Never add copper to paint or apply copper directly to wounds as it inhibits the natural wound healing response.
- **Other fungicides.** Stirred in fungicides or cocktails may not have adjuvants or penetrants required for maximum activity and remember, these home brews are not registered.



Greenseal ULTRA treated tree



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Pruning techniques

1. **Use sharp pruning equipment.** Blunt loppers tend to squeeze tissues creating fissures which facilitate infection.
2. **Cut proud of the collar** surrounding the base of the branch. This allows a donut-like callus which promotes rapid wound healing (see Figure 1).
3. **Never leave stub wounds.** These always dieback. No wound dressing will protect dying wood, enabling fungi to enter.
4. **Learn from last year.** Look at last year's pruning wounds. If donut-like rings are present and the wounds have healed (see Figure 2) your pruning practice is correct.

Use Greenseal ULTRA pruning wound dressing for the control of:

Silver Leaf (*Chondrostereum purpureum*)

Dead Arm (*Eutypa lata*)

European Canker (*Neonectria galligena*)

Application rates

Apply Greenseal ULTRA at a rate of between 6 and 12 litres per hectare, according to wound numbers and size.

Availability

Greenseal ULTRA is available in 2 litre and 10 litre containers.

Free applicators are supplied, one per 2 litres.



Figure 1 – shows donut-like callus



Figure 2 – shows healed stem



Figure 3 - Greenseal ULTRA treated tree

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