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The Myth of Wound Dressings:

"Apply wound dressing after pruning to insure against insect or fungal invasion"

The Myth

Although Shigo debunked the myth of wound dressing decades ago, it still persists, particularly among those with something to sell. A quick look at the Internet revealed the following claims (I've left out brand names, but they're easy to find):

- "A clean, easy, simple way to aid in healing cuts and protecting tree wounds, pruned-edges and graft unions of roses, trees, and shrubs"
- "Insure your trees, shrubs, and vines against decay, insects, and fungi in any kind of weather"
- "An artificial bark for treatment of wounds...made of ALL NATURAL biodegradable materials"

And my personal favorite (advertised as "an extremely durable rust and corrosion inhibitor") lists a multitude of wonderful uses for their product:

- Trucks -Farms and Construction Equipment - Collision Shops
- Tree Wound Dressing - Gutter and Flashing Sealer
- Seals Electrical Boxes and Fittings - Concrete and Asphalt Driveway Crack Sealer

More recently, "green" companies have peddled collagen, pectin, hydrogel, and aloe gel as "natural" tree healers. These hucksters claim that "the surface will heal over quickly and insects are repelled by the bitter taste." Not one shred of scientific evidence is ever offered to substantiate these miracles.

The Reality

***Tree wound dressing*:** A petroleum-based product used to cover freshly cut wood to inhibit decay or insect infestation. (From the glossary on Regenesis.net)

Yikes! Think about this stuff – a petroleum-based product. Does this sound like a substance that would be beneficial to a living tissue? Would you use it to treat a cut on your own skin? If the idea repels you, carry that feeling over to plant health care.

Wound dressings <u>do</u>:

- seal in moisture and decay
- sometimes serve as a food source for pathogens
- prevent wound wood from forming
- inhibit compartmentalization
- eventually crack, exposing the tree to pathogens

Wound dressings <u>do not</u>:

- prevent entrance of decay organisms
- stop rot

For some inexplicable reason, some people are compelled to "manage" a process that plants have evolved over millions of years. Every year, trees form hundreds of tiny abscission layers as leaves senesce and

fall. Wounds left from branch breakage are callused over and compartmentalized. But look at this advice from another web site with something to sell:

- "Bark with cracks. This is a ***natural*** (emphasis mine) occurrence in the growth of trees & shrubs. Where cracking occurs in the lower wood it is probably caused by flooding after a long period of dryness. Cracks in the trunk should be painted with a tree wound dressing or bituminous paint to prevent the invasion of fungal diseases"

It's important to recognize that trees do not heal. Instead, they isolate damage through formation of suberized, lignified wood that physically and chemically repels invasion. Callus develops at the edge of the wound and gradually expands towards the center. This wound wood remains for the life of the tree; bark does not regenerate itself the same way our skin does.

There may be some benefit in treating wounds of trees particularly susceptible to certain diseases, such as oak wilt. Many regions in the country specify that oaks pruned in areas where oak wilt is a problem should be treated to prevent infection. While research supporting this advice is sketchy at best, it may be justifiable to use a fungicide or insecticide during spring or summer pruning. If pruning is done during the dormant season, the chance of infection is greatly reduced and wound treatment should be avoided.

Finally, the use of wound dressing "for aesthetic reasons" is never justified. In this case, the customer is not "always right." Let these situations serve as opportunities to educate the tree owner.

The Bottom Line

- Like all living organisms, plants have natural resistance mechanisms to fight insect attack or disease.
- Covering wounds with traditional sealants inhibits oxidative processes, which in turn will reduce callus formation and subsequent compartmentalization.
- Optimal pruning time for insect- or disease-prone species is in the fall or winter when temperatures and infection rates are lower.
- If you must prune a disease-prone species when insects or fungi are active (i.e. during the warmer times of the year), a light coating of an insecticide or fungicide may be warranted.
- Try sterilizing pruning tools. Such measures can help reduce the transmission of certain plant diseases to healthy plants.
- Control disease spread through preventative management practices such as disposal of contaminated organic material and use of disease-free compost and mulch).

For more information, please visit Dr. Chalker-Scott's web page at http://www.theinformedgardener.com.