

Mower Wounds KILL TREES

Seemingly small bumps or scrapes by mowers can cause severe damage to valuable shade trees. Operators need to understand what mower injuries do.

by Terry A. Tattar, Associate Professor of Plant Pathology, University of Massachusetts, Amherst, and Alex L. Shigo, Chief Scientist, Forestry Science Laboratory, USDA Forest Service, Durham, N.H.

One golf course superintendent in New York, frustrated over continued wounding of trees despite his repeated warning, laid off the entire mowing crew for a day. He no longer has serious tree wound problems from lawnmowers.

Lawnmowers are often operated by people with little or no training in arboriculture. They do not understand injury and infection started by lawnmower wounds can often be the most serious threat to tree health on golf courses, parks, and other landscapes.

Most arborists and tree

pathologists have been aware of the lawnmower problem for some time. Extensive research has been conducted on the importance of wounds in tree health care (Shigo 1977, 1979). This research has led to significant adjustments in pruning, cabling, bracing, injection, and cavity treatment (Shigo 1982).

Despite this knowledge, one major source of wounds, lawnmowers, remains a constant threat to tree health care (Tattar, 1978).

Lawnmowers cause the most severe injury during periods when tree bark is most likely to "slip", in early spring during leaf

emergence and in early fall during leaf drop. If the bark slips, a large wound is produced from even minor injuries.

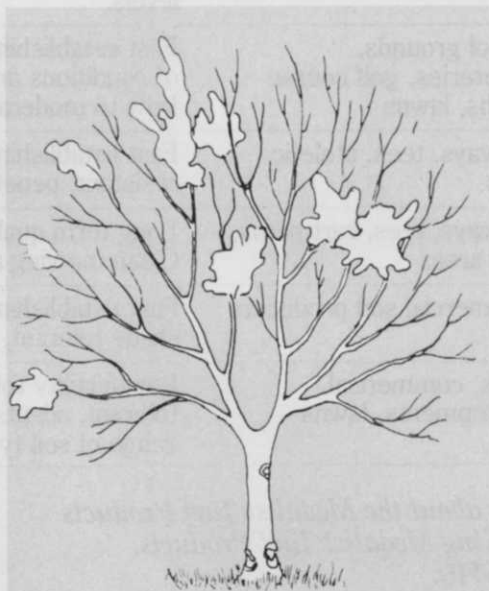
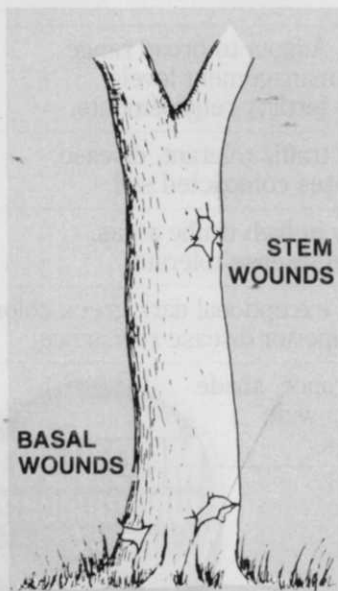
Most tree injuries occur when mower operators attempt to trim grass around trunks with a push or riding mower. This can be prevented by removal of turf around trees or hand trimming.

The site of injury is usually the root buttress, since it flares out from the trunk and gets in the path of the mower. However, injury is also common anywhere from the roots to several feet above the ground.

Although large wounds are most serious, repeated small wounds can also add up to trouble.

Wounds from lawnmowers are serious enough by themselves, but the wounded tree must also protect itself from pathogens that invade the wound. These microorganisms can often attack the injured bark and invade the adjacent healthy tissues, greatly enlarging the affected area. Sometimes, trees can be completely girdled from microbial attack following lawnmower wounds.

Decay fungi also become active on the wound surface and structural deterioration of the woody tissues beneath the wound will often occur. Many wounded trees which are not girdled may eventually break off at the stem or root collar due to internal decay.



Multiple wounds from landscape equipment result in loss of tree foliage and eventual death.

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The lawnmower injury problem is not a tree problem but a people problem. It is a classic case of communication breakdown. The solution is to educate lawnmower operators about tree

loose bark should be cut away and the edges of the wound should be traced using a hand tool such as a pruning knife.

Pruning tools should be sterilized between trees. There is no need to cut additional tissue around the wound to achieve a certain shape. Avoid making deep scribes or any vertical sharp points which serve as additional sites for bark dieback and starting points for bark cracks.

Older injuries with callus development all around the wound are best left alone. If any bark around old wounds is dead it is advisable to trace the area back to live bark. Application of wound dressing for cosmetic purposes is optional. **WT&T**

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wounds and then to hold them responsible for any tree wounds they cause.

Injury treatment

Bark can often be successfully reattached to trees if the wounds are treated within a few hours after injury occurs. Torn bark should be positioned as much as possible in its exact position before the injury and held in place by a few small tacks or staples.

If several days or weeks have passed since the injury, torn or

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