Pruning tree branches and treating subsequent wounds

At most clubs, the greenstaff are hard pressed to carry out all the required maintenance and cultivation of turf, let alone attempt to keep trees in first-class condition. This means that often the only work carried out is the removal of branches to favour the growth of other plants.

By David Francis

Removing branches permits light to the grass and herbaceous undergrowth and also helps increase air circulation, which improves the turf's quality. Occasionally, other factors influence branch removal, such as preventing dead or unsafe branches causing damage to golfers and property, and also allowing access to golfers.

Pruning only out of necessity is probably no bad thing for trees, as the improper pruning of branches is one of the most damaging injuries they can have inflicted upon them.

The bark acts like a skin, protecting the inner wood from micro-organisms that can cause deterioration. A poorly made pruning wound can expose the heartwood of the tree trunk and it is often invaded by fungal organisms that can, in time, cause decay, instability and the tree's possible death.

In the past, it was recognised arboricultural practice to remove branches as flush to the trunk as possible and then to paint the wound with a proprietary sealant with the intention of protecting the wood until it had callused over.

However, research work carried out in recent years by Dr Alex Shigo of the United States Forestry Service suggests that trees are able to chemically set up boundaries of resistance against advancing fungal pathogens and prevent the fungal decay reaching the trunk. This wall of resistance appears to occur in the branch collar which, on most trees, appears where the branch joins the trunk.

The main problem in the past has been that the existing method of cutting branches flush to the trunk removed this branch collar and so removed the site of resistance to decay organisms. Hence, the fungal pathogen gained access into the heartwood of the trunk and the decay process began unchallenged. So, to apply these theories on a practical basis, the removal of branches growing from the trunk should take the following course.

First, as in any branch removal, the main weight of the branch must be removed before the final cut is made. The branch should be undercut approximately one third of its diameter (A). This will prevent the branch from tearing the bark away down the trunk. Then, several inches out from the undercut, make a top cut (B) down through the branch. This will remove the main weight of the branch, leaving you with a stub that must then be removed.

The final cut should be made just in front of the branch collar and not through it (C) and never through the branch bark ridge as this will expose the trunk's inner wood. Leaving this collar will result in the protective boundary being left intact and also a smaller wound to the tree than would result with flush cutting.

Theoretically, wound sealants were applied for a...
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