



The Mistletoe

by Paul J. Pugliese

Look!!! It has new leaves! It's green! Is it Spring? No — it's mistletoe in my tree! If you look up to the top of your deciduous trees (they should be dormant) in the middle of December and see green leaves, then you might have a mistletoe problem. Perhaps the only good use of mistletoe is that it can be used postmortem to lure unsuspecting sweethearts to a kiss around Christmas time. For the other 364 days of the year, it is actually considered an infectious parasite that kills trees! It's okay to smooch under the mistletoe — just don't eat it, since it can make you very sick. So, be sure to keep it away from children and pets during the holidays.

Mistletoe is an evergreen, parasitic plant found on a wide range of tree hosts including alder, birch, cottonwood, maple, oak, hickory, and elm, among others. Mistletoe obtains water and nutrients from the host tree, but it is not totally dependent. Leaves of the mistletoe contain chlorophyll and are capable of making their own food from carbon dioxide and water like other plants. Birds feed on the berries and deposit them on new trees in their droppings, which is how mistletoe spreads from tree to tree. When the seeds germinate, they grow through the bark and into the vascular system of the host where it obtains water and minerals. This can be particularly stressful to trees during drought. Trees that are heavily infested by mistletoe over a period of several years may be reduced in vigor, become stunted, or even killed, especially if subjected to drought stress, harsh winter conditions, construction injury, diseases, insects, or other conditions which further weaken the tree.

Mistletoe grows slowly at first and it may be years before seeds are produced. Healthy trees are able to tolerate small mistletoe infestations, but individual branches may be compromised and susceptible to wind or snow breakage. Since mistletoe takes several years to produce seed, simply removing it will provide some protection from spreading. However, if you remove only the mistletoe, it will probably re-grow. To effectively control mistletoe, it should be pruned one to two feet beyond the point of attachment. If

the mistletoe is located on a main limb or trunk, removing the top of the mistletoe and wrapping the cut with an opaque plastic to prevent sunlight may be beneficial. Since mistletoe requires light, it will die within a couple of years. It may be necessary to repeat this treatment, especially if the wrapping becomes detached or the mistletoe is not completely killed.

In addition to these mechanical controls, the growth regulator ethephon may be used when trees are dormant. Research conducted in other states indicates that growth regulators, such as ethephon, are effective in managing mistletoe. To be effective, the spray must be applied in the dormant season and thoroughly wet the mistletoe foliage. Mistletoe shoots may re-sprout in 3-5 years and require re-treatment. It is not known what effect repeated sprayings every few years will have on either the mistletoe's survival or the host tree's vigor.

Removing infected limbs may not be easy when the mistletoe is in a tree top. Years ago, people would shoot it out with shotguns, but we don't recommend that now. This might be a good reason to hire an ISA certified arborist on large, high value trees. This control method can be difficult since you must be careful not to leave stubs and should follow proper tree pruning techniques. Avoid 'topping' trees, since this destroys their shape and can make them at risk to losing limbs later. Catching mistletoe early is the key to successfully managing this damaging pest. Severely infested trees should probably be removed entirely to avoid liability and the potential spread of mistletoe to adjacent trees. Consider planting new trees that are not as susceptible to mistletoe in neighborhoods where this is a major issue.

Paul Pugliese is the Agriculture and Natural Resources Extension Agent for Cherokee County Cooperative Extension, a partnership of The University of Georgia, The U.S. Department of Agriculture, and Cherokee County. For more information and free publications, please call (770) 479-0418, or visit Website at www.ugaextension.com/cherokee.