



Topic: Unexplained limb breakages of Mahogany Tree

Question: There are two large mahogany trees on my property. Both trees appeared in good shape until about three months ago. Since then one of the trees has been losing large pieces of its branches that break away from the tree. The breakages are still occurring. In one case, my neighbor heard a loud explosion before seeing a limb fall to the ground. The canopy is now about half full. We've had no strong winds that would have caused this and no other trees are affected. Do you know what's going on and is there a cure?

Imke, Cape Coral

Answer: This phenomenon has been noticed in large and apparently healthy trees including oaks, silk oaks, pines and Eucalyptus. There are no definite answers as to its cause but it is not attributed to heavy winds or storms. The initial limb damage usually occurs on a calm hot day often in late summer or early fall; the consequences may last for months. Branch failure may take place 3 to 12 feet from the branch attachment, or less frequently, at the branch unions. It is reasoned that this is a genetic defect of individual trees. Speculation is that the xylem, the water conducting tissue of the tree, when subjected to extreme pressure, causes branch failure in one of two ways or a combination of both. Firstly, severe gas pressure, created by bacteria in the xylem, results in internal explosions and unexpected limb breakage. Secondly, a tree's dense canopy can reduce transpiration by creating a micro climate of higher humidity than the surrounding atmosphere. This could weaken the walls of the xylem cells in the branches. Along with the heavy canopy load, branches are subjected to importune fractures. The deed has already been done and more limbs may continue to fall. Nevertheless, the tree should survive albeit with a changed appearance.



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