For Release June 1, 2013

Bacterial Wetwood More of a Nuisance Than A Problem

AGRI-VIEWS
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If you take the time to look at most elm trees in the Great Plains, you will find areas where sap has, or is, oozing out of the tree. The area is usually discolored, if the sap has dropped on the ground, it has usually killed any vegetation and the areas of the bark around the oozing often look slimy and just plain yucky, for lack of a better term! As offensive, smelly, and concerning as this may be, it's usually more of a nuisance than an actual tree health problem.

The condition is known as bacterial wetwood. Bacterial wetwood is a bacterial infection in the heartwood of the tree. It is probably present in over 99% of all elm trees in Kansas, probably most cottonwoods and it can show up in nearly any tree species that we have. The bad news is that there really isn't any way to treat it or deal with it. The good news is that while it is a nuisance, it is not usually life threatening to the tree.

Bacteria establish a colony inside the tree, usually in the center of the tree. There are usually more than one species of bacteria involved. Over a dozen species have been identified as the most common and many of the species have yet to be identified. The bacteria can get into the tree in any number of ways. An injury to the tree can allow the bacteria can get into the tree. It may be a broken branch, or a break in the bark from a lawnmower. Even the simple act of pounding a nail into a tree to hang a birdhouse can get the bacterial infection started.

Over time the bacterial colonies grow in size and complexity. Obviously, many of the bacteria are adept at living in low oxygen environments. A homeowner may not know that a tree has wetwood infection until it is cut down and the staining in the heartwood becomes obvious. Or the wetwood infection may be present for decades before its presence is made known by the sapping out, or slime flux. Interestingly, the presence of bacterial wetwood creates a near oxygen free (anaerobic) region that prevents decay by fungi.

Some of the bacteria produce methane and hydrogen and all can develop a type of fermentation that builds up pressure and causes the sap to find a weak spot to leak out. This sapping or fluxing usually becomes more obvious in the spring, probably due to increased sap flow from normal growth. As the summer moves along sap flow tends to decrease and I'm sure bacteria activity decreases in higher temperatures also.

As the slime flows out of the tree (it isn't just sap being forced out under pressure, it is sap that has been altered by the bacteria) it flows down the side of the tree or drips off a branch on to the ground below. The constant flow of the slime will discolor the bark on the tree. In fact you can see this quite regularly on larger older elm trees whether there is active slime flux or not. Just start looking at elm trees around town. More of a concern is where the slime is dripping out of a branch on to the lawn as it will kill the grass and any other vegetation that it drips on regularly. As long as the slime is dripping there is no way to counteract or stop this impact.

Occasionally we'll see some scorching, wilting, yellowing or defoliation in limbs with active wetwood. Fortunately these effects are usually short lived. Bacterial wetwood is a very common condition. It rarely creates any long term health issues with the tree, but it is a nuisance because of the cosmetic impact to the tree and any other vegetation that get's in the way. So if you look at your elm tree today and notice a wet oozy yucky looking region of bark, it's nothing to worry about, it's just bacterial wetwood!

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