

# THE PURDUE LANDSCAPE REPORT

## What is happening to the Weeping Willows?

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While recent temperatures have been moderate in many parts of the state, rainfall has been lacking. (See [The Annual Drought Article](#)). There are chasms in the clay of my backyard that will swallow my kids and dogs whole. While I am not truly worried about the safety of my smaller family members, a lot of the plants that are not in shade are stressed. At the Purdue Plant and Pest Diagnostic Laboratory, we have received quite a few calls, emails, and samples about trees in decline. Trees that are already stressed, infected by a pathogen, or are infested by wood-boring insects will be showing their true colors in these drought conditions: chlorosis, leaf loss, and limb dieback.



Figure 1: Willow showing yellowing of older leaves on lower branches. Credit: PPDL

This month, one group of trees limps along to the top of our list of plants under stress due to lack of water: Willows (Figure 1). *Salix* spp. are not great landscape trees in general unless planted in locations that retain water. While they grow quickly and can appear beautiful for a number of years, when the soil becomes dry, these trees can very quickly develop limb dieback or cankers (Figure 2 and 3). In many cases, cankers become more obvious during these periods of stress because they were already present before the drought stress occurs (Figure 4). Damaged limbs die faster and multiple species of canker-causing fungi have been found to move faster in drought stressed wood of some tree species. We have found the fungi *Cytospora*, *Botryosphaeria*, and *Colletotrichum* associated with cankers on recent branch submissions to the lab.



Figure 2: Willow tree showing decline symptoms. Credit: PPDL



Figure 3: Limb dieback and tree decline of willow in the landscape. Credit: Lindsey Purcell



Figure 4: Branch dieback developing on stressed willow trees.  
Credit: PPDL

Thinning of the branches, cracks/splits in the bark, and black lesions on green stems can indicate the presence of a canker which should be pruned out and destroyed, if at all possible. Supplemental irrigation may be required during dry spells for trees that are water loving or, at least, drought intolerant. Fungicides are not effective for these fungal pathogens that live inside the wood, where fungicides can't penetrate. In most cases larger willow trees will not die because of these problems but they may suffer significant branch loss and may become disfigured. In some cases very young trees or shrub type willows may be killed.

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