

Red Oak Leaf Symptoms

Comparing Oak Wilt, Bacterial Leaf Scorch and Drought

Let's start by asking a few questions:

How long have you been seeing symptoms?

- If the answer is “this (red oak) tree has been looking bad for months, years”, oak wilt can typically be ruled out.

Have you seen symptoms in previous years?

- If the answer is “each year about this time”, bacterial leaf scorch can be suspected.

Is the entire leaf brown? Is a solid-portion of the leaf brown? Are brown spots scattered or irregular across leaf?

- If the answer is “the leaves are either all brown or all yellow or green”, oak wilt or drought can be suspected.
- If the answer is “a solid-top part is brown with the base being green”, bacterial leaf scorch can be suspected.
- If the answer is “spotted or irregular pattern”, leaf spot fungus can be suspected.

How long ago was the tree planted?

- If the answer is “in the last 8 years”, then the tree is probably not connected to other oaks. Check for root development issues causing drought symptoms.

Is the tree within 50-75 feet of other red oaks or live oaks? Are those oaks dead or dying?

- If the answer is “there are oaks nearby and they died recently”, oak wilt can be suspected and neighboring trees should be inspected.
- If the answer is “there aren't any oaks nearby and those close-by are healthy”, there is a very low chance that tree was infected by oak wilt, but it can be monitored to see how quickly it dies and the patterns of leaf decline that exist.

Common Oak Wilt Symptoms

It is very rare for single red oaks which are not near other dead oaks to get infected and die of oak wilt. Red oaks which are partially dead and partially alive are nearly always not infected with oak wilt. On the contrary, red oaks in or near an oak wilt center which appear to be dead or dying should be assumed infected with oak wilt and destroyed accordingly.

Red oaks die quickly once infected with oak wilt, typically in 1 to 4 months. This rapid decline often results in leaves which turn entirely brown and stay on the tree while sometimes retaining a flat appearance. Yellow or brown leaves may drop from the tree while retaining a flat appearance. Other symptoms of oak wilt for red oaks include leaves appearing to “rain” down from tree or leaves which are lime green with a washed out or water soaked appearance. Leaf margins or tips can be brown while the rest of the leaf is green.



Sometimes a combination of these symptoms will occur on the same tree. [It is possible for red oaks suffering from oak wilt to sprout new stems from the base which can have green leaves or leaves with brown edges; these trees should still be destroyed despite this new base growth.]

If the tree is somewhat isolated from other oaks, then it is generally ok to wait and see if the tree dies completely before removing. If the tree doesn't die or grows new leaves, then it is more than likely not infected with oak wilt. If the tree is in or near an oak wilt center, then the tree can be destroyed immediately without waiting to see if it dies completely.

Bacterial Leaf Scorch Symptoms

Bacterial leaf scorch can infect red oaks and other tree species. The disease rarely kills the tree, and it often shows symptoms each year, particularly in late summer. The disease is spread primarily by spittlebug and leaf hopper insects.

The leaves of the tree will start to brown prematurely in midsummer. By late summer and fall, the leaf margins will be entirely brown and may begin curling. Sometimes the dead brown tissue is separated from the healthy green tissue by a thin yellow or other colored line. The base of the leaf where it attached to the petiole will commonly remain green, at least at first. If more leaves continue to turn brown prematurely over a few years, the tree can die from lack of energy production due to the green chlorophyll not being able to perform photosynthesis. Sometimes new twig growth at the top of the red oak will remain green because this new growth has not been filled with the disease yet.



Trees exhibiting these symptoms which are not in or near an oak wilt center can typically be left to see if they remain alive and recover in the spring.

Drought Symptoms

Drought is typically a slower process which allows trees to seal off leaves so that they don't use resources from the tree causing further stress to the tree.

Leaves of a red oak suffering from drought will often drop from the tree onto the ground as fully yellow or fully brown leaves. Leaves which remain on the tree are often completely brown and have very curled edges. If this happens, is important to test the twigs and buds for life before removing the tree. Twigs which show green tissue when scratched and remain bendable will often recover unless the drought continues.

Sometimes these drought symptoms are not from a lack of rain but rather a lack of root development in planted trees. Root stability can be tested (by trying to push the tree from side to side) to see if roots are not growing and not properly supporting or anchoring the tree into the surrounding soil.