

fusiform rust (*Cronartium quercuum* f.sp. *fusiforme*)



spindle-shaped galls



orange fruiting bodies
on oak leaves



fusiform rust

Cronartium quercuum f. sp. fusiforme

Fusiform rust infections that occur on the main stem within the first 5 years of a tree's life normally cause tree death. Infections that occur later in the life cycle of the tree weaken the stem, resulting in wind breakage at the canker or quality loss at rotation. Losses in individual nurseries can exceed 80 percent. Loblolly and slash pine are the most susceptible species. Longleaf is fairly resistant, while shortleaf pine is highly resistant. Oak is the alternate host.

The fungus produces orange spores on the surface of fusiform-shaped pine galls in the spring. Orange spores are produced on the lower surface of the oak leaves. Later, hair-like structures are also produced on the leaf.

Spindle-shaped swellings or galls develop on the branches or main stem. Main stem infections on older trees are somewhat depressed on one side. Trees commonly break at the canker. In the spring, the galls turn orange. Infection on the oak host produces orange leaf spots and hair-like telia, which can cause cupping and curling of the leaf.