



# PCR vs. Isolation and the War Against Oak Wilt

**Kevin Belter**  
211 Joey Drive  
Boeme, TX 78006, USA  
[kevin@arborcareandconsulting.com](mailto:kevin@arborcareandconsulting.com)

## ABSTRACT

*Bretziella fagacearum* is a devastating disease. In no place in the United States are the losses of oaks in both quantity and diversity worse than in Central Texas. Current management strategies employed in Texas have not proven extremely effective. There is a desperate need to advance every tool possible that can assist those of us who dedicate our lives to the care of oaks. Recently, DNA analysis using polymerase chain reaction (PCR) was proven to be the best standard laboratory protocol in oak-wilt diagnostics (Yang and Juzwik 2017). Specifically, two PCR methods of testing for oak wilt have proven more consistent in finding the oak-wilt pathogen in various species within subgenus *Quercus* section *Quercus* as well as in section *Lobatae* (though in this section the results are equivocal). By extension, a reasonable expectation is that this method could more effectively diagnose oak wilt accurately from samples throughout the family Fagaceae. One of the unique and most useful aspects of this method is its ability to detect the fungus in wood samples that are as much as one year old. The fact is this fungus doesn't stand a chance under the scrutiny of PCR.

**Keywords:** *Bretziella fagacearum*, *Ceratocystis fagacearum*, polymerase chain reaction