IN SEARCH OF SASSAFRAS WITH RESISTANCE TO LAUREL WILT DISEASE

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Laurel wilt disease has killed over 300 million redbay in the southeastern USA and is now spreading in sassafras as far north as Kentucky and Tennessee. Currently few if any options are available for managing laurel wilt disease and reducing its effects on forest health. Fungicide injections have been found effective but their costs and need for reapplying make them unsuitable to forests. Cost effective and sustainable options are needed if we are to maintain laurel wilt susceptible hosts as functioning parts of ecosystems. Variation in susceptibility has been identified in redbay and developing host resistance in this species is a promising management option. A collaborative team from the USDA Forest Service, Kentucky Division of Forestry, University of Kentucky, and University of Florida are developing the criteria (e.g., what level of mortality, time since LWD infection, survivorship of hosts in certain diameter classes…) for defining large surviving sassafras from high mortality stands that are likely to have some resistance to laurel wilt disease and not escapes. Using the tool/criteria, we will identify and propagate putatively resistant selections that can be used to develop resistance screening methods and identification of host resistance. Propagated material will be maintained by the University of Kentucky and SRS until disease resistance screening. The tool/criteria will allow others to make their own selections of putatively resistant sassafras from across the region. Ultimately this work will be the start of developing a sustainable and long-term management option using host resistance to maintain sassafras as a functioning member of forested ecosystems.