Regional Variation in Fusiform Rust Disease in Loblolly Pine

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Loblolly pine is the most commercially important timber species in the South, and its susceptibility to fusiform rust disease can negatively impact the economics of plantations by increasing mortality and reducing wood quality with stem galls. Regional variation in fusiform rust virulence and the resistance to rust disease in loblolly families play a key role in determining future selections and pose a challenge in matching specific families to specific pathogen populations when new plantations are established.

In previous studies, the regional diversity in fusiform rust disease resistance could not be readily assessed because the genetic trials were not uniformly planted across the region. A series of trials of 140 families derived from first-generation plantation selections of loblolly pine will be analyzed to determine if distinct patterns of geographic differences in rust resistance exist for improved loblolly pine in the southern US.

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