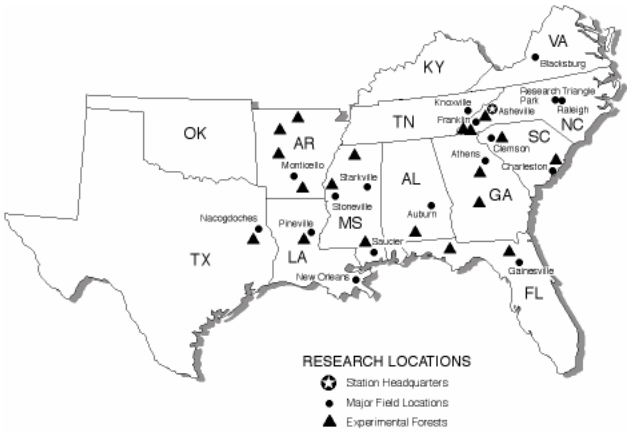
Research & Development
USDA Forest Service

Healthy Forest Restoration Act Projects
Title IV-Silvicultural Assessment

Project Title: Applied Silvicultural Assessment of Southern Pine Beetle in Southern Pine Stands West of the Mississippi River
Monticello, AR (SRS-4106)

Significance: Outbreaks of the southern pine beetle (Dendroctonus frontalis) (SPB) cycle within the Southern region and we cannot anticipate when or where they will occur or predict their severity. Consequently, when outbreaks do occur the effects on forest health are devastating. Other than immediate control of SPB infestations, the silvicultural tools available to develop stands resistant to SPB and to rehabilitate affected stands are poorly understood.

Approach: Scientists at Monticello and cooperators with Texas A&M University and the University of Arkansas will impose treatments on approximately 900 acres to configure pine stands of the west Gulf region to desired future condition. Those stands will then be quantified and modeled to determine SPB hazard in a stand and landscape context. Results from the ASA will be communicated to landowners and resource managers through field demonstrations and web-based visualization products.



Outcome(s): Deliverable products include new silvicultural systems to limit catastrophic tree mortality, improved ability to evaluate the efficacy of wide area treatments, specific validated silvicultural alternatives to reduce SPB impacts, and SPB hazard and risk assessment protocols improved to enable application at all relevant spatial and temporal scales.

Benefits: By providing better silvicultural choices to increase the resistance of southern pine stands to SPB, the economic losses and ecological impacts suffered during outbreaks can be mitigated locally and regionally. Moreover, the association of these silvicultural systems with public and private lands will be of benefit to local industry as well as to landowners in the region.

Contact(s): Dr. James Guldin- Project Leader, Upland Forest Ecology and Management
USDA Forest Service-Southern Research Station
100 Reserve St. Hot Springs, AR 71901
(501)- 623-1180; jguldin@fs.fed.us