FIRE EFFECTS WITHIN GROUP SHELTERWOOD SYSTEMS ON REGENERATION RESPONSE AND RESIDUAL TIMBER QUALITY

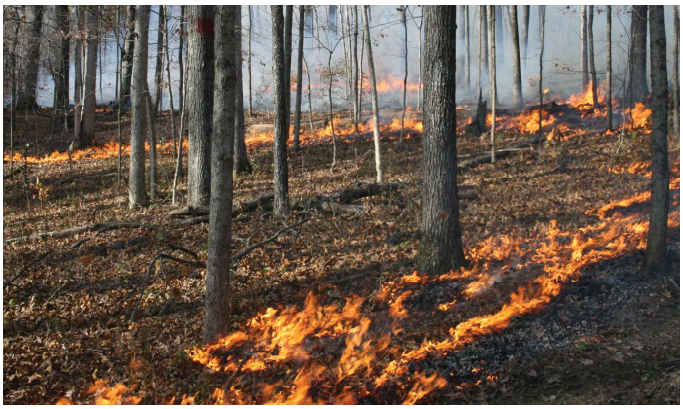
A McIntire-Stennis supported project

PURDUE UNIVERSITY
Forestry and Natural Resources

Over the past 50 years, there has been widespread failure to regenerate many oak species in Eastern North America. These species provide habitat for over 180 species of birds and mammals and supply more than $1 trillion in stumpage value as a source for many primary and secondary wood products companies.

Much of the forestland in this region of the United States is owned by private landowners, while much of the research done in regeneration focuses on much larger areas. This project aims to find regeneration systems that may be more attractive to small, private woodlots.

Prescibed fire is one method that is being increasingly embraced by managers who wish to restore oak. Combining this method with group shelterwood systems, a forest regeneration method used widely in Europe, is the focus of this project. We aim to both document the effects of prescribed fire on growth and development of tree regeneration and model the potential economic damage to mature timber with prescribed fire's use for forest restoration.



About McIntire-Stennis

The McIntire-Stennis program, a unique federal-state partnership, cultivates and delivers forestry and natural resource innovations for a better future. By advancing research and education that increases the understanding of emerging challenges and fosters the development of relevant solutions, the McIntire-Stennis program has ensured healthy resilient forests and communities and an exceptional natural resources workforce since 1962.

USDA

AUDIENCE

Audiences for this project include students, research scientists, professional foresters and wildlife managers, in addition to small woodland owners and the public

23

Journal articles and conference papers have come out of the research since 2017

IMPACT

Scientists have concluded that we are dangerously close to the precipe of large-scale replacement of oak trees by more shade tolerant and less ecologically and economically valuable tree species.

$16 billion

In Indiana alone, annual harvest of sawtimber contributes $16 billion to the state economy

16-34 Acres

The average family forest holdings in the northern Central Hardwood Region fell in this range in 2006

Lesson Plans

This project produced lesson plans for grades 3-6 to educate youth on forest management practices