

Public Abstract

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Title:Factors Influencing Upland Oak Advance Reproduction in the Missouri Ozarks

Regenerating oak forests in upland landscapes has been a serious problem in fertile forest stands in Eastern North America. Insufficient quantities of well developed seedlings has been cited as the major reason for oak forest regeneration failure. This study builds on past research to better understand the physical properties that determine how the density of oak seedlings or advance reproduction varies in the understory of mature forests without disturbances such as fire, herbicide application, or harvesting. The models generated using data collected in the Missouri Ozarks suggest that soil properties and the direction the slope is facing have the greatest significance in determining the abundance of oak reproduction. This information is useful to researchers and land managers who want to predict which oak forests need treatments to ensure their existence for future generations.