

2005. Cipollini, M., Gaskell, A. *, and C. Worrell*. Use of herbicides and prescribed burning to control hardwoods in the regeneration and restoration of Mountain Longleaf Pine habitats. *Longleaf Alliance Report* 8: 9-13.

Abstract: Hardwood control is a problem in the regeneration on restoration of Longleaf Pine (*Pinus palustris*) stands. Data concerning hardwood management techniques are generally lacking for Mountain Longleaf Pine habitats in NW Georgia and NE Alabama. In this study, three experiments were set up on the Berry College campus to evaluate the effects of herbicide and prescribed burning in hardwood control: 1) an evaluation of Garlon 3A in the control of hardwood re-sprouts in a clearer-cut area planted with Mountain Longleaf Pine seedlings; 2) an evaluation Arsenal injection in the control of hardwoods in mature Mountain Longleaf Pine stands, and 3) an examination of the effects of a spring prescribed fuel reduction burn in mature stands. In the first experiment, hardwoods were treated by foliar spray in June 2004, and effects measured four weeks later. In the second experiment, hardwoods in five mature stands were injected March 2004 and effects measured on July 2004. In the third experiment, fuel analyses were taken before and after an April 2004 prescribed burn (two study stands), and from burned and unburned areas (three study stands). Hardwood re-sprouts reacted differently to Garlon 3A, with certain species (e.g., Sweet-gum) showing resistance to the herbicide. The Arsenal injection results were confounded by the prescribed burn, but Red Maple was significantly negatively affected by the herbicide treatment independent of the effects of burning. Finally, fuel analysis showed limited effects on the abundance of small hardwoods despite considerable reduction of litter, duff and downed woody fuels.

* - *undergraduate coauthor*