



North Carolina Forest Service

To protect, manage, and promote forest resources for the citizens of North Carolina

Compiled by Bill Pickens—Conifer Silviculturist

Publication compiles latest information on herbicide application for hardwood management.

A general interest in hardwood management continues to grow in North Carolina. With increasing management opportunities, land owners are asking more questions on the use of herbicides for hardwood management. Most of the herbicides used in forestry are formulated to control hardwood species in favor of pine species. The challenge for hardwood management is to identify what herbicides and applications can control the unwanted species, but not damage the desired hardwood trees.

A paper found in the proceedings of the 18th Biennial Southern Silviculture Research Conference summarizes information compiled from several research studies looking at competition control in hardwood stands. It presents herbicide choices and application rates when managing hardwoods for site preparation, herbaceous weed control, mid-story injection, and to control several common invasive species. The paper is authored by Andy Ezell and Brady Self, professors at the Department of Forestry, Mississippi State University.

Some notable points from the article:

- While herbicide options after planting differ greatly between pines and hardwoods, site preparation herbicide use is basically the same. And both pines and hardwoods benefit from competition control.
- There is no documented phytotoxic effects on planted hardwoods from imazapyr (e.g. Chopper) when the hardwoods are planted at least 12 weeks after application for site prep.
- The author recommends applying herbicides to former agriculture fields in 4 to 6 foot wide bands to reduce cost and provide wildlife habitat.
- A common herbaceous weed control recommendation in hardwoods (except cottonwood) is 2 ounces of Oust XP per acre applied as a pre-emergent prior to bud break. On high pH soils (≥ 6.5) reduce

the rate of Oust to 1 ounce per acre.

- Goal 2XL (oxyfluorfen) as both a pre and post emergent is another choice for HWC in hardwoods that has not shown any toxic effects.
- The authors also like Arsenal AC as the standard for mid-story injection because it controls so many woody species.
- The paper details herbicide recommendations for several invasive/noxious species including 7 problem vines, cogongrass, baccharis, privet, bamboo, switchcane, and tallowtree that are applicable to both pine and hardwood management regimes.

The abstract and a link to for the paper follows.

Abstract—The use of herbicides in hardwood management presents special problems in that many of the most effective herbicides are either designed to control hardwoods or the product is not labeled for such applications. Numerous studies involving herbicide application in hardwoods have been completed at Mississippi State University. This paper is a compilation of results from research projects which provides the latest information for such applications which we have to make available.

<http://www.treesearch.fs.fed.us/pubs/50708>

Citation:

Ezell, Andrew W.; Self, A. Brady 2016. Herbicide options for hardwood management. In: Proceedings of the 18th biennial southern silvicultural research conference. e-Gen. Tech. Rep. SRS-212. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 6 p.

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