Quality Vegetation Management

A HOW-TO GUIDE FOR

Managing Mid-Rotation Pine Stands

Early successional habitat is comprised of forbs and grasses that are preferred by many wildlife species. In pine forests, forb and grass growth is often inhibited by dense hardwood midstories that shade out the ground. Typically, midstory trees are not merchantable and would be expensive to remove mechanically. Further, simply cutting a tree down will often stimulate root sprouting, thus prolonging and compounding the problem.

What is Quality Vegetation Management?

Quality Vegetation Management (QVM) is a tactic to improve wildlife habitat quality in mid-rotation pine stands following thinning. It consists of:

- Using an imazapyr product* to kill undesirable hardwood midstory (e.g., sweetgum, Chinese privet, etc.)
- Using prescribed fire to burn pine straw and leaf litter and stimulate desirable plant growth from seed bank

Benefits of QVM

- Research has documented a tremendous increase in deer habitat quality
- Improved nesting and brood rearing habitat for wild turkey and quail
- Removes hardwood competition within pine stands to improve pine growth
- One herbicide application, followed by periodic prescribed fire, can last 10+ years
- Provides site preparation for next timber rotation
- Increased use by songbirds and other wildlife

Management Strategy

1. Thin pines to basal area ≤60 ft^2/ac to allow adequate sunlight to reach forest floor
2. Wait one year following thinning for hardwood midstory to develop
3. Spray imazapyr product during late summer thru mid fall (July 15 – October 15). Example applications: Arsenal AC at 16 oz/ac using a helicopter, Chopper at 32 oz/ac using a skidder or tractor
4. Conduct a dormant season prescribed burn during February – March
5. Continue burning on a 2–3 year rotation to maintain habitat quality

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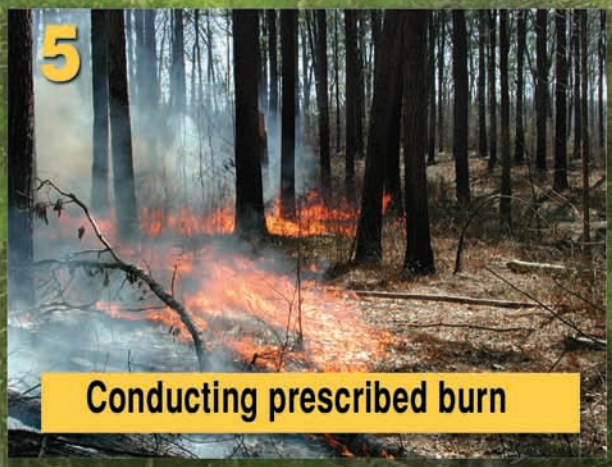
*examples of imazapyr are Arsenal AC, Chopper, Chopper GEN2, and Polaris AC

1
Pines that need thinning

2
Recently-thinned pines

3
1-year later = sweetgum invasion

4
Spraying herbicide with tractor


5
Conducting prescribed burn

6
First spring after herbicide and fire - Hardwoods are dead

7
Second spring after herbicide and fire - Vegetation re-grows

8
Fourth spring after herbicide and fire - Vegetation maintained