

# What a Forest Practitioner Has Learned by Developing an Operational Program for Cogongrass Management

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## **Scotch Lumber Company in southwest Alabama**

- Objectives for management of 170,000 acres
  - Sawtimber/Veneer/Pole production
  - Wildlife enhancement
- Cogongrass interference
  - Competition reduces seedling growth rates and eliminates seedlings
  - Alters natural habitats
  - Monumental fire hazard if growth is unchecked
  - No wildlife value

## **Development of Cogongrass treatment program**

- Began program 8-9 years ago in late 1990's (unaware of potential problems)
- Hired one contractor 5-6 years ago
- Hired two additional contractors and began keeping better records, including mapping of infestations
- As of 2005 have 11 contractors, keep much more detailed records including field tags and GPS coordinates of infestations.

## **Mapping and reconnaissance**

- Recon work done during dormant months – patch discovering is better then
- 'Garmin GPS 72' units are used – points are downloaded to ARC Map 9.2 for map production
- Customized flagging (thicker and wider, thereby holding up better) is used in the field
- Aluminum tags with number codes corresponding with individual spray sheet entries are used, creating a permanent reference point for each patch of cogongrass

## **Equipment and procedures**

- Required equipment for contractors
  - Skidder, wheel tractor, pickup trucks, ATV
  - Pump capable of at least 90 lbs psi at pump
  - 300 ft of 3/8 inch hose (minimum) – we supply extra sections of hose
  - GunJet nozzles (Spraying Systems Inc.) – produces **uniform** droplet sizes
  - Flow meters (costly and inaccurate)
  - 400 gallons of water (minimum) and in graduated tanks

## **Treatment procedure with a location map given to contractor**

- Patch is flagged with a 8-10' buffer
- Aluminum tag is nailed to pine tree facing the road
- Patch is sprayed to run-off (getting into, under and around all obstacles)
- Data recorded on the spray sheet: date, landowner, compartment number, patch number, coordinates, acreage, volume of mix used on patch
- Data is entered on a computer for billing to landowner by foresters
- Contractors are checked regularly for quality control and accuracy by forestry department staff

### **Herbicide Mixture – 2007**

- Per 50 gallon mix
  - 32 oz Accord XRT
  - 100 oz Chopper (2 lb imazapyr/gal) and will be changing to 70 oz. Chopper Gen2
  - 32 oz methylated seed oil (MSO) (Conquer or Destiny)
  - 12 oz blue marker dye (Dyna Mark)
- Sprayed to run-off/wet (volume varies from patch to patch)
- A large grass leaf surface area requires more volume per acre
- Smaller droplets mean better coverage
- Calibration – not easy in forest setting
- Volumes applied averaged approximately 500 gallons per acre depending on the size of the patch, the thickness and height of the cogongrass patch

### **Seed prevention spraying – first done in 2007**

- Small number of acres in Greene Co., MS
- Rate of 6.5 oz of glyphosate (4lb ai/gal) per 10 gal of water
- Lightly sprayed – goes very quickly
- Short window of opportunity – only from first green up until seedheads start to open
- Respray in the fall of the year with regular prescription

### **Follow up data and mapping**

- Spot check patches sprayed 2 years ago and retreat if needed – approximately 6200 patches were sprayed in 2007 (~ 600 acres)
- 2008 will yield some valuable data from our test plots and actual patches sprayed
- 2008 will be first year for us to look back at our results on a patch basis and determine how well or poorly treatments worked

### **Spread prevention methods ... most important phase of the program!**

- Clean **all** equipment (skidders, bull dozers, road graders, farm tractors, etc.) before bringing it onto our lands
- Majority of our patches are the result of dirt being moved in the past
- We **pay** our loggers to wash their equipment
- Educate everyone (loggers, company, county and state road crews, site prep contractors, hunters, general public, politicians, etc.)
- When you prevent an outbreak you save money!

### **Results of our program**

- Most important – we have **slowed** the spread of cogongrass by a large amount with our prevention methods
- Do not have specific scientific data, but results two years after treatment look good
- We think we have **killed** some cogongrass in the smaller, immature patches. Time will tell about the larger spots.
- Our recorded data (spray sheets) should help us make some positive adjustments next year.

### **Our observations**

- Our program is a work in progress
- We're open to constructive criticism and suggestions
- We can't cover 170,000 acres in 1-2 years ... we have to slow the spread of cogongrass to be able to manage it
- Opinions differ on consequences of stand maintenance burning – we see evidence supporting both sides
- We're unsure how quickly you can permit activity (logging, fire line construction, etc.) after treating cogongrass and still prevent spreading it

- We focus on higher priority areas such as upcoming harvest cuts, thinning, fire line construction areas and roads
- Cost is the largest limiting factor!

**My opinion – for what it is worth!**

- **The herbicides to kill cogongrass are on the market – we need a *delivery system* to drive the herbicide to the end of the last rhizome**
- **The reason more people don't fight cogongrass is because of the cost!**
- **The South historically has had a conservative attitude – no one wants government in their affairs**
- **The solution is government funding for assistance so everyone can participate**
- **Only politicians can affect this solution**
- **Share information and get involved!**