Cogongrass: Lessons learned from Alabama

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Today’s Topic

• 8 things we have learned about cogongrass and its management in Alabama
  – Seeds
  – Rhizomes
  – Control strategies
1. Alabama was late to the cogongrass fight

Graph showing the phases of cogongrass expansion:
- **Lag Phase**: Initial introduction to few locales
- **Rapid Expansion Phase**: Many locales
- **Approaching Biological Potential**: Approaching high infestation levels
Cogongrass Infestations by County in the Southeast U.S.

As reported to State Authorities by May 2010
All known infestations in South Carolina, Georgia and Tennessee are under treatment

Map produced by the Center for Invasive Species and Ecosystem Health
University of Georgia in Cooperation with States

# of infestations
reported as of May 2010

0
1
2-10
11-20
21-50
51-100
>100
2. Across Alabama, cogongrass seed production is an issue
Cogongrass is being spread by hay
Cogongrass spread by mowing in the spring... and mowers
...along roadsides
...powerlines
...wildlife food plots
...and by fireplows
3. It is NOT easy to stop spring flowering with late winter treatments
Results from multiple studies in south Alabama

• Glyphosate late winter treatment to new growth was inconsistent in stopping spring flowering, especially in areas of high thatch
  – Poor cogongrass control
  – Wasted herbicide

• Both glyphosate and imazapyr fall treatments have resulted in a 99-100% reduction in cogongrass flowering the following spring
4. Pay attention to what you may not see
Seasonal biomass from a 6-8” deep rhizome mat

Rhizome biomass (g/0.25m²)

(1.5 – 3.7 ton/A)

Tilman’s Corner
Bayou La Batre
• A 6 inch rhizome established a dense rhizome mat to a depth of 12 inches in two years
Program Findings

- 26,831 patches surveyed
- Average Rhizome depth: 4.2 inches
- Average grass height: 1.7 feet
5. This map is very sobering concerning cogongrass distribution...

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...but not all of it looks like this!
Program Findings

- Scouted
  - 1,145 properties
  - 26,831 patches over 37 counties
  - 2,176 cogongrass acres
  - 400,000+ acres searched

  - Mean patch size = 0.07 acres (50 by 60 foot patch)

  - 23 patches/property (0-596)
To report cogongrass infestation contact your local
Alabama Forestry Commission Office.

Data updated daily by the Alabama Forestry Commission

Data as of 9/5/2012 9:24:15 AM

8698 Number of Spots

If data does not display contact mike.kyser - Map Service provided by ISD Geospatial Office
6. There are several weed management tools that do not control cogongrass
Cogongrass and Burning: Nope.
Cogongrass growth 1 month after burning
Cogongrass and Mowing: Nope.
Cogongrass and grazing: Nope.
Cogongrass and Biocontrol?

Nope.
Forestry/noncrop/pasture herbicides that do not control cogongrass

- 2,4-D
- Triclopyr (Garlon, Remedy)
- Clopyralid (Transline)
- Aminopyralid (Milestone VM, GrazonNext)
- Picloram (Tordon 101M, Grazon, Surmount)
- Dicamba (Banvel, Clarity, Vanquish, Distinct)
- Metsulfuron (Escort)
- Sulfometuron (Oust)
- Sulfosulfuron (Outrider)
- Hexazinone (Velpar), Tebuthiuron (Spike)
What about aminocyclopyrachlor?

• Non-crop herbicides
  – Perspective, Streamline, Viewpoint
  – MAT28 or KJM044
  – Burn down vegetative growth (Temporary)
  – Prevent flowering (for one season)
  – Kill some rhizomes

• Has not been as good for rhizome kill as either glyphosate or imazapyr when applied once
Cogongrass Rhizome Response 12 MAT

% Reduction

- Imazapyr
- Glyphosate
- MAT28
7. Herbicide active ingredients that can kill cogongrass

- Glyphosate
  - 3-4 lb ai/A
    - 3-4 qt/A for most glyphosate products
  - 2-5% v/v depending on the product

- Imazapyr
  - 0.5-1 lb ai/A
    - 48-64 oz/A for 2 lb/gal products
  - 0.5%-2% v/v depending on the product
Glyphosate (May and October each year)

Rhizome biomass (g/0.25m²)

- Tilman's Corner
- Bayou La Batre

Spray

0
4/1/08
10/1/08
1/1/09
10/1/09
1/1/10
10/1/10
4/1/11
7/1/11

50
100
150
200
250
Rhizome biomass (g/0.25m²)

Glyphosate (1 app/yr in August)

Tilman's Corner
Bayou La Batre
Glyphosate Summary

• 2 treatments per year effective
  – 3-6 treatments needed for these two sites
• August and October annual treatments varied by site
  – Don’t wait 12 months to go back with glyphosate
• Glyphosate recommendations
  – 4 lb ai/A (broadcast)
  – 4-5% v/v of a minimum 41% ai product (Spot)
  – Add NIS when needed
Rhizome biomass (g/0.25m²)

Imazapyr (1 app/yr in May)

Tilman's Corner
Bayou La Batre

Spray
Spray
Spray

4/1/08 7/1/08 10/1/08 1/1/09 4/1/09 7/1/09 10/1/09 1/1/10 4/1/10 7/1/10 10/1/10 1/1/11 4/1/11 7/1/11
Rhizome biomass (g/0.25m$^2$)
Imazapyr Summary

• 2-3 annual treatments works
• Imazapyr recommendations
  – 0.75 lb ai/A broadcast
  – 2% v/v for a 2 lb ai/gal formulation (spot)
  – Add NIS or MSO
• Not to be used under hardwoods
• Repeated high rates cannot be safely used under longleaf and slash pine
8. Do not wait to begin
Questions?