

# Killing Trees & Brush in Your Fence Lines

NW FL Beef Conference

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# Trees, Brush, and Fences

- ▶ Hurricane Michael and fences – a bad combination
- ▶ Granted, there plenty of options out there for physically removing trees and brush
- ▶ **An herbicide program can be a valuable tool for cleaning and maintaining a fence line.**

# Foliar Applications

- ▶ Foliar Applications – spray solution is applied directly to leaves
  - ▶ Leaves must be present and actively growing
- ▶ Controlling trees and brush with foliar applications is difficult, **the details matter**





# Foliar Applications

- ▶ Ratio of leaf area to total biomass is key
  - ▶ Mowing prior to spraying generally reduces herbicide efficacy, wait on **regrowth**
    - ▶ **Woody perennials – 3-4 feet**
    - ▶ **Herbaceous Perennials – 6-12+ inches**
    - ▶ New plants are easiest to control when young/small



# Foliar Applications – Timing

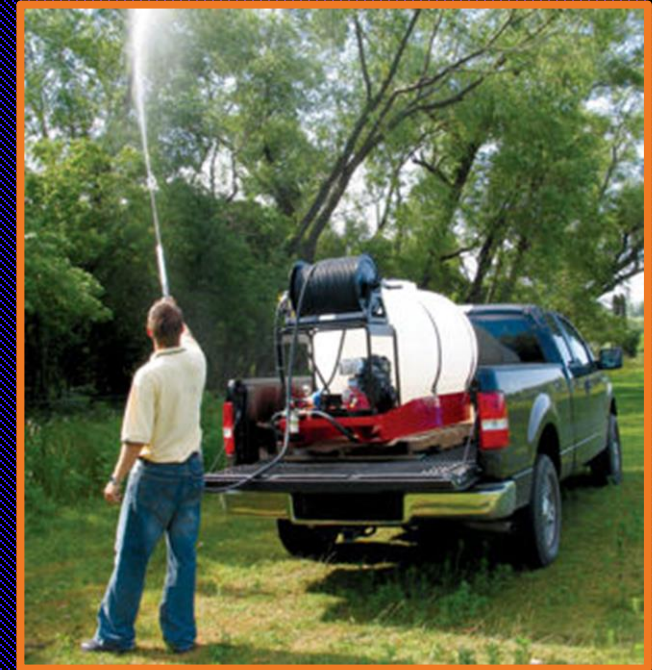
- ▶ Woody species
  - ▶ Deciduous - After full leaf out through **early fall** but before leaves change color
  - ▶ Evergreen woody species can be treated on **mild winter days**
- ▶ Herbaceous perennials
  - ▶ Early bloom through fall
- ▶ Herbaceous annuals
  - ▶ The smaller the better





# Foliar Applications

- ▶ Plant height - **6-8ft max**
- ▶ **Spray drift management**
  - ▶ Increased likelihood of non-target injury, especially with taller plants
- ▶ Coverage
  - ▶ All leaves need to be covered but not to the point of runoff
- ▶ **Use a surfactant** (0.25% - 0.50% v/v)



# Foliar Applications



Spray to Wet (Good Coverage)



Over-application, to the point of runoff  
(Wasteful)



# Foliar Active Herbicides

- ▶ There are lots of options and combinations; remember to consider
  - ▶ Efficacy on **your** target species
  - ▶ Selectivity
  - ▶ Soil and/or Residual Activity
  - ▶ Price
- ▶ **We're here to help – let us...**



# Foliar Active Herbicides

- ▶ Glyphosate
  - ▶ *Roundup, Accord, Rodeo, Razor, others*
- ▶ Triclopyr amine
  - ▶ *Garlon 3A, Renovate, Tahoe 3A, others*
- ▶ Triclopyr ester
  - ▶ *Garlon 4, Element 4, Tahoe 4E, Pathfinder II, others*
- ▶ Imazapyr
  - ▶ *Arsenal, Polaris, Habitat, Stalker, etc.*

# Individual Plant Treatments

- ▶ Basal Application
- ▶ Hack and Squirt
- ▶ Cut Stump





# Individual Plant Treatments

- ▶ **Very selective**
- ▶ Labor Intensive
- ▶ Less sensitive to timing than foliar applications



# Individual Plant Treatments

- ▶ Basal, H&S, or Cut Stump?
  - ▶ Do you mind standing, dead trees/shrubs?
    - ▶ **Basal and H&S will result in standing, dead trees**
  - ▶ How big are the trees/shrubs you want to control?
  - ▶ What kind of bark do they have?



# Basal Application (low volume)

- ▶ Basal Applications – herbicide mixed with an oil penetrant/carrier is applied directly to the bark of a standing tree or shrub
- ▶ Trees need to be **less than 6 inches in diameter and have smooth bark**
  - ▶ Oak trees???



# Basal Application

- ▶ Can be successful anytime of year
  - ▶ Winter is the best time of year for these treatments
- ▶ **The bottom 12-16" of the stem need to be completely coated with herbicide/oil mixture (no runoff)**
- ▶ Very effective, very slow – months



# Basal Applications - Herbicides

- ▶ 20-30% solution of **triclopyr ester** in basal oil
  - ▶ Garlon 4
  - ▶ Element 4
  - ▶ Tahoe 4E
  - ▶ Remedy
  - ▶ Pathfinder (premix)



# Hack & Squirt

- ▶ Applying herbicide solution directly to the tree's cambium layer (growing/living tissue immediately under the bark)



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# Hack & Squirt

- ▶ Glyphosate: 50% solution with continuous frill
- ▶ Garlon 3A: 50% solution
- ▶ Arsenal 6 oz/gal
  - ▶ 1 ml per hack
  - ▶ 1 hack per 3-4" DBH



**This is not necessary**

# Cut Stump

- ▶ Can be successful anytime of year
  - ▶ Winter is an excellent time of year for these treatments
- ▶ Prevents regrowth from stump and root system
- ▶ Cut tree, **immediately** remove sawdust and **apply herbicide** solution to the cut surface and collar



Courtesy of: James H. Miller, USDA Forest Service.  
Invasive Plants of the Eastern United States CD-ROM



# Cut Stump

- ▶ For larger stumps (over 3 inches in diameter) herbicide only needs to be applied to the outer edge
- ▶ For smaller stumps coat entire cut surface
- ▶ Herbicide can be applied with a backpack or hand sprayer, squirt bottle, or paint brush
- ▶ A tracer dye is always recommended



# Cut Stump - Herbicides

- ▶ Glyphosate: 50 to 100% solution
- ▶ Triclopyr Amine (*Garlon 3A*): 50-100%
- ▶ Triclopyr Ester (*Garlon 4*): 20 to 30%
- ▶ Imazapyr (*Arsenal, 2 lbs formulation*): 8 to 16 oz/gal



# Cut Stump

- ▶ Very effective and dependable
- ▶ No standing, dead trees to deal with
- ▶ “Old” stumps – **re-cut** to live tissue or use herbicide oil mixture around collar

# Soil Treatments

- ▶ Require extreme caution
  - ▶ Products are largely nonselective (at least between trees)
  - ▶ Desirable tree roots can extend a long way
  - ▶ Products can move down slope



# Soil Treatments

- ▶ Techniques
  - ▶ Spreading granular herbicide
  - ▶ Spraying (or streaming) herbicide solution
  - ▶ Applying undiluted herbicide in spots

# Final Thoughts

- ▶ Carefully consider your herbicide and delivery method, pick what works for **your** scenario
- ▶ Foliar Applications – Coverage (leaf area) and off-target damage
- ▶ Basal Treatments require an oil carrier
- ▶ Cut stump “always” works
- ▶ We’re here to help
- ▶ Beef & Forage Field Day, March 15

# Questions???

- ▶ Thank you to Dr. Stephen Enloe and Dr. Jay Ferrell for their substantial contributions to this presentation.

