Bahiagrass Control as Pre-seeding Preparation for Groundcover Restoration

Christopher S. Matson
The Nature Conservancy’s Disney Wilderness Preserve
End Goal: Something like this...
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Site preparation

- Apply multiple glyphosate herbicide treatments as needed over two growing seasons (up to 8 applications)
- Also known as “spraying a lot”
Before “Spraying a Lot”…
Site preparation

• Restore hydrology of wetlands before performing flatwoods restoration
Site preparation

- Do not pull cattle off site until herbicide application is securely scheduled.
Site preparation

- Fences should come down just prior to herbicide application if using ground equipment.
Site preparation

- Burn the site pre-herbicide if possible
- if not possible pre-, then post-first application
Site preparation

- NO disking
- Remove all rebar, stumps, woody debris and human artifacts
- Root rake is the preferred tool for a quick job; many other options available for sensitive sites
Sodgrass Removal Review

- Restore hydrology
- Cease grazing a few weeks before treatment
- Remove fences
- Burn the site if possible
- Remove obstacles
- Spray the unit for two growing seasons as bahiagrass continues to be detectable
- Don’t disk unless there is a necessity to do so—compacted trail, old cogongrass patch that dominates an area
Results of individual restorations at DWP

Fringed yellow star grass in recently burned multiple herbicide restoration
Site 1--Single herbicide with multiple diskings

- LOTS of follow-up “spot treatments”—if you consider the large majority of your site to be a spot treatment
- Follow-up with imazapic (Plateau) when all else “looked dismal”
- Low species diversity seeded
Candler I West B, Pre-restoration condition 2001
Candler I West B, In-treatment condition 2002
Candler I West B, Post-restoration condition 2003
6 months after seeding
Candler I West B, Post-restoration condition 2004
End of second growing season post-seeding;
imazapic application allowed bluestem grasses
to increase substantially
Candler I West B, Post-restoration condition 2005
Post growing season fire
Wiregrass and bluestems in midground;
density board in restored former two-trail
Candler I West B, Post-restoration condition 2006
Post a second growing season fire;
wiregrass and bluestems, low forb diversity
Site 2--Multiple Herbicide, no disk as preparation

Nearly no follow-up herbicide post seeding

Seeded with high diversity mix of over 70 intentional
Candler I North CP-1 S January 8, 2004 seeded for 3 weeks
Candler I North CP-1 S October 5, 2004 seeded for 10.5 months
Candler I North CP-1 S October 11, 2005
seeded for 2 growing seasons
Candler I North CP-1 S November 21, 2006
seeded 3 growing seasons, burned 2006
Warning

Graphs coming!!!!
Control Results For 3 Years

Mean relative cover* of non-native species

Multiple herbicide site
minimal post-seed work

Single herbicide/multiple disk site
Substantial post-seed work

* 90% confidence interval, as measured in random ½-m² cover plots.

Dashed line indicates 20% non-native cover success threshold
Multiple herbicide site middle of 3rd year post seeding—July 2006
Wiregrass and diversity in multiple herbicide restoration, 3rd year post-seeding—July 2006
Multiple herbicide site end of 3rd year post-seeding—November 2006
Multiple herbicide site end of 3rd year post-seeding—November 2006
Multiple herbicide site end of 3rd year post-seeding—November 2006