



# MANAGEMENT AND CONTROL OF BUFFELGRASS AND KLEBERG BLUESTEM FOR WILDLIFE

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# Study Site: Hixon Ranch





# Aggressive Burning Regime



360 ft.



270 ft.





# Introduction

- Exotic Grasses

- Widespread in S. TX
- Forbs less abundant
- Bare ground limiting
- Insects and grassland birds reduced



Buffelgrass



Exotic Grass Landscape



Kleberg  
Bluestem



# Introduction

- Bobwhite densities half
- Avoided by scaled quail





# Native Restoration: Objectives

- Previously no answer for native plant restoration in non-native grasses in South Texas
- Fishing for solutions
- Treatment and timing combinations of...
  - Soil disturbance
  - Planting natives
  - Fire
  - Herbicides
  - Mowing
- Flexibility





# Pretreatment (2008)

Buffelgrass



Kleberg Bluestem





Sandy Loam (Buffelgrass)



Other Plots

Ranch Plots

Pilot Plots

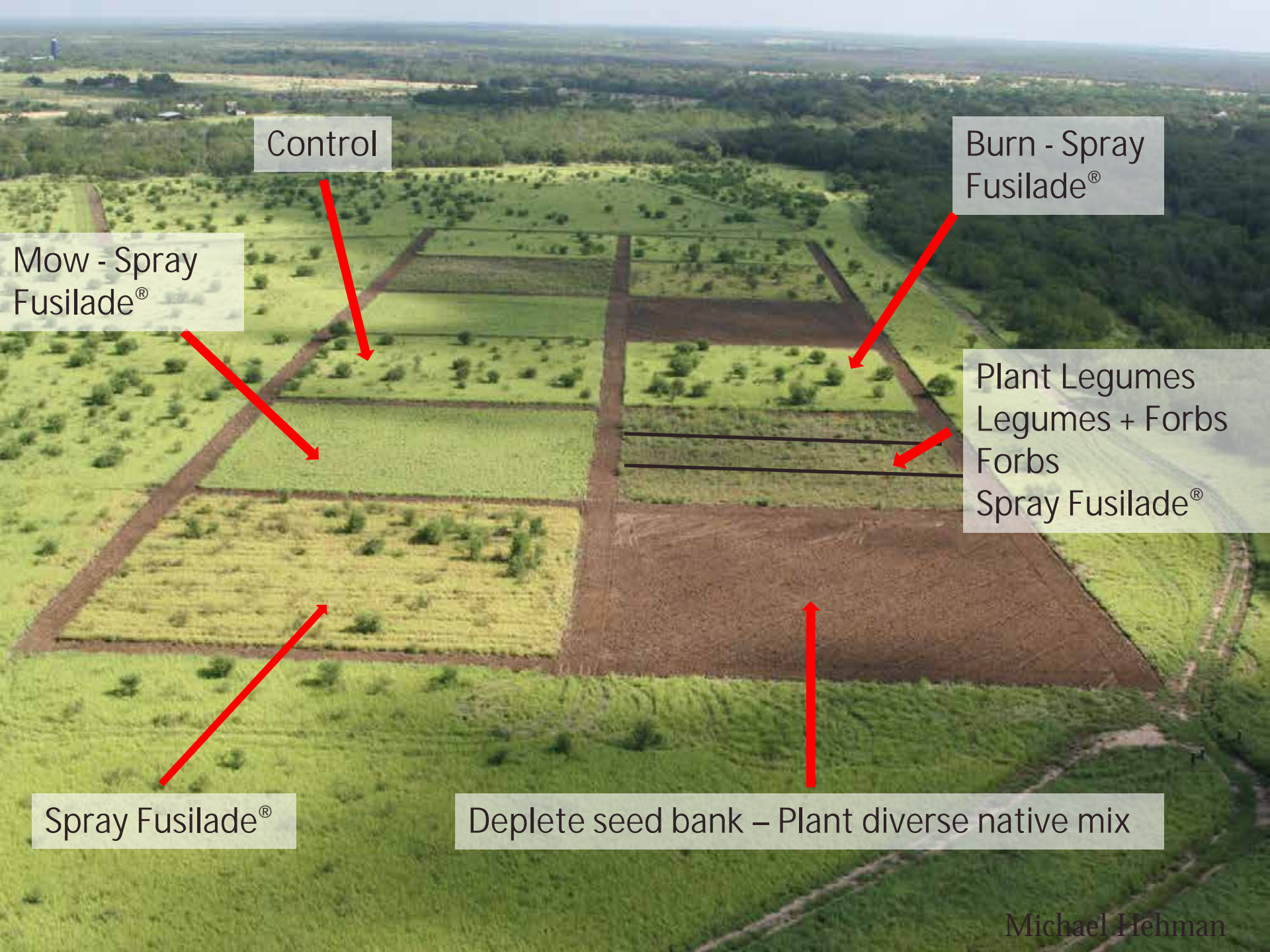
Other Plots

Pilot Plots

Ranch Plots

Saline Clay Loam (Kleberg Bluestem)





Control

Burn - Spray  
Fusilade®

Mow - Spray  
Fusilade®

Plant Legumes  
Legumes + Forbs  
Forbs  
Spray Fusilade®

Spray Fusilade®

Deplete seed bank – Plant diverse native mix



# Results

- These grass specific herbicides not effective
  - Fusilade®
  - Clincher®
  - Verdict®
- Roundup effective, but requires multiple applications on buffelgrass
- Soil disturbance effective for short term





# Results (Plant Forbs + Spray Fusilade)

Longevity after final treatment = 3 years

Cost = \$475/ac





# Results (Repeat Disk then Plant)

Longevity after final treatment = ?

Cost = \$480/ac

Kleberg Bluestem Site





# Results (Plow + Repeat Disk)

Longevity after final treatment = ?

Cost = \$155/ac





# Results (Plow, Repeat Disk, Plant)

Longevity after final treatment = ?

Cost = \$415/ac





No Quail in 2008 to 1 Bird/1.2 Acres





# Recommendations

- Soil disturbance and Roundup useful in diversifying exotic stands for a short time
- Native communities can be restored using farming techniques in combination with planting
- Follow-up by spot spraying a must
- Flexibility a must
- Avoid soil disturbance in native plant communities
- Avoid burning in winter





# Acknowledgments



- Funding
  - Hixon Ranch and Family
  - South Texas Natives
  - Native Plant Society of Texas
  - "E" Kika de la Garza Plant Material Center
  - Harvey Weil Sportsman Foundation
  - Arthur Seeligson Conservation Fund
  - Houston Livestock Show and Rodeo
  - Rene Barrientos
- Additional Support
  - Mike Hehman, Blake Martin, Tim Fulbright, and David Wester
  - Anna Lund, Ryan Peters, Eric Redeker, Chase Currie, and Megan Lesak
  - All other students and ranch and support staff





# Questions?

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