
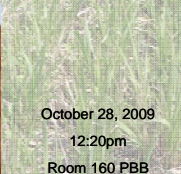



Avian Response to Production Stands of Native Warm-Season Grasses


Andrew West
*Department of Forestry,
Wildlife and Fisheries*
University of Tennessee

October 28, 2009
12:20pm
Room 160 PBB

Loss of Early Successional Habitat

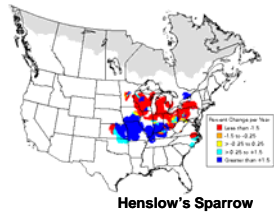
- Problems
- Ecological Drivers
 - Fire
 - Herbivory
 - Drought regimes



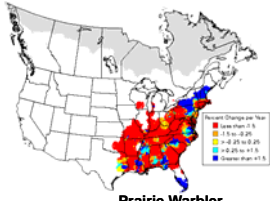
A. A. Lew, 2004

Grassland Bird Trends

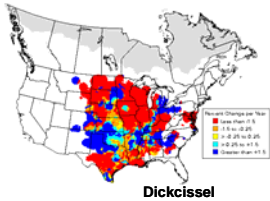
Sauer et al. 2008



Henslow's Sparrow

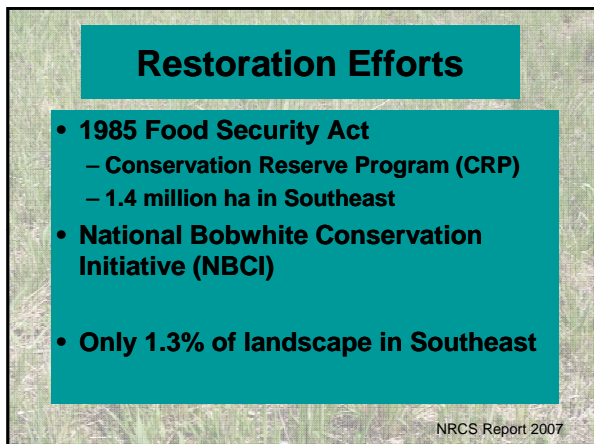


Prairie Warbler



Dickcissel

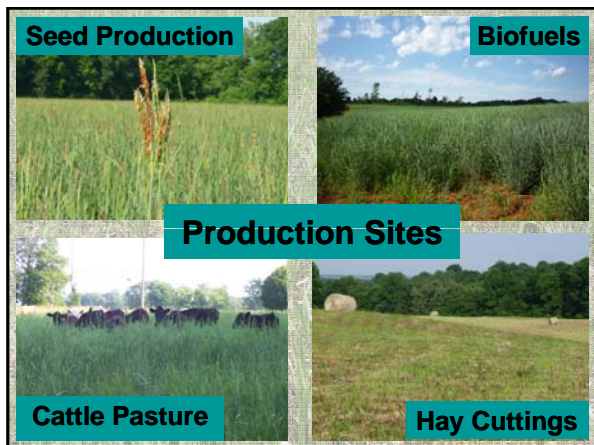
Percent Change per Year
■ Less than -2.5
■ -1.5 to -0.25
■ 0.25 to 0.25
■ 0.25 to 0.25
■ Greater than 0.25




Restoration Efforts


- **1985 Food Security Act**
 - Conservation Reserve Program (CRP)
 - 1.4 million ha in Southeast
- **National Bobwhite Conservation Initiative (NBCI)**
- **Only 1.3% of landscape in Southeast**

NRCS Report 2007






Seed Production

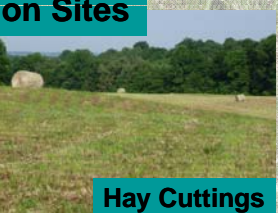


Biofuels

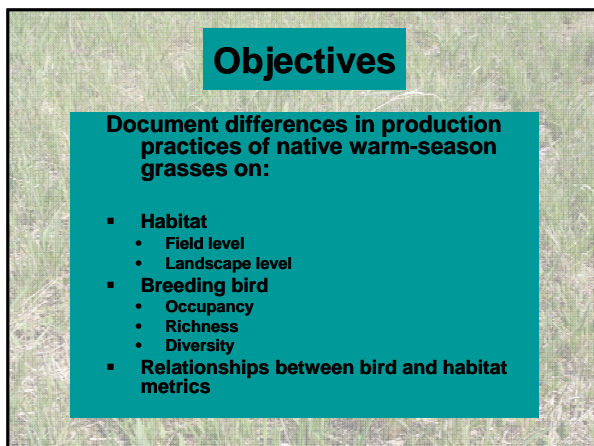
Production Sites



Cattle Pasture



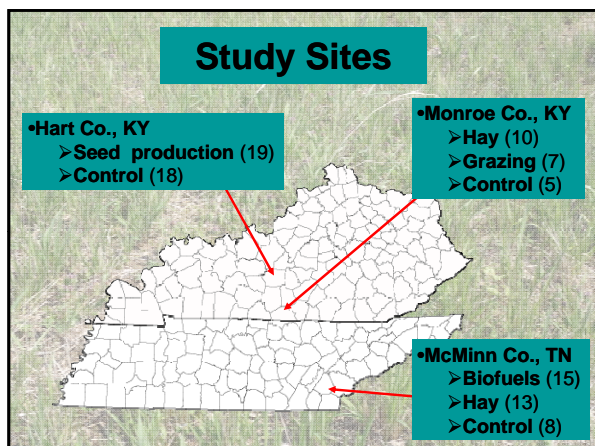
Hay Cuttings

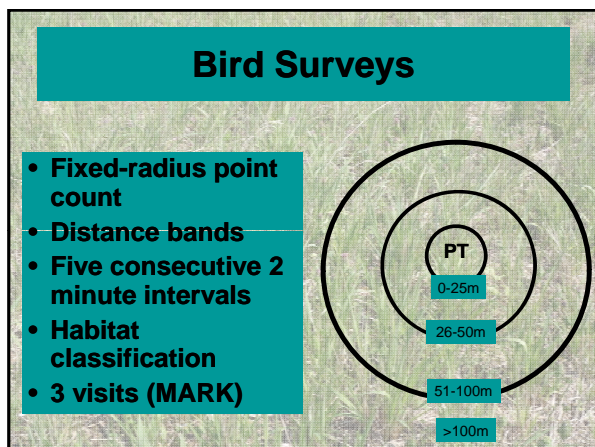


Objectives

Document differences in production practices of native warm-season grasses on:


- **Habitat**
 - Field level
 - Landscape level
- **Breeding bird**
 - Occupancy
 - Richness
 - Diversity
- **Relationships between bird and habitat metrics**








Vegetation Sampling

- 12 transects per field
- 

Landscape-Level Habitat

- Using GIS
 - 1km radius
 - Classify surrounding landscape
- NWSG
- Forest
- Water
- Crops
- CSG pasture
- CSG hay
- Development



Analysis

Regression Modeling

- One-way ANOVA
- Two-way ANOVA
- PCA
- Treatment by location (n = 8)
- Regression model
- Percent bare ground
- Percent bare ground
- Herd density
- Density cover
- Density cover
- Binomial cover
- NWSG – Cool season grass
- Means separation test
- Woody
- Means separation test

Management Implications

- Production lands are market driven
- CRP only 10 yr contracts
- If 10% of crop and pasture land in Southeast
= 3.7 million more ha

Acknowledgements

Dr. Keyser
Dr. Buehler and
Dr. Ralston

Special thanks to all
my technicians
and landowners



Questions