Grazing as a Grassland Habitat Management Tool

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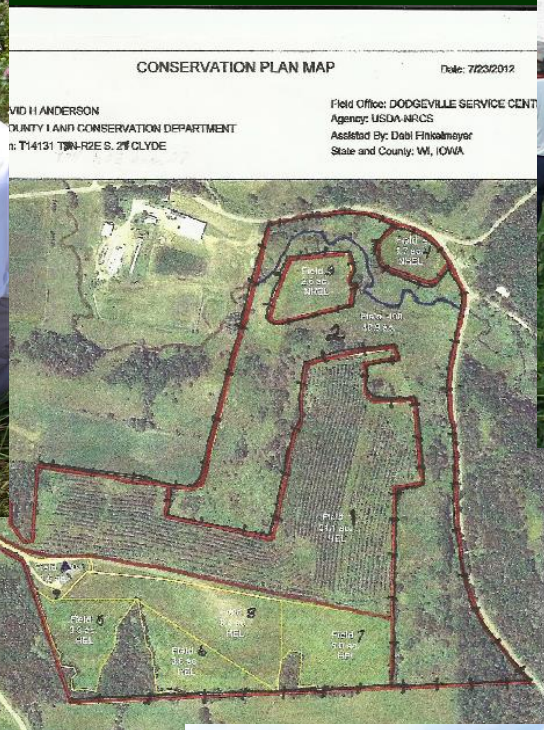
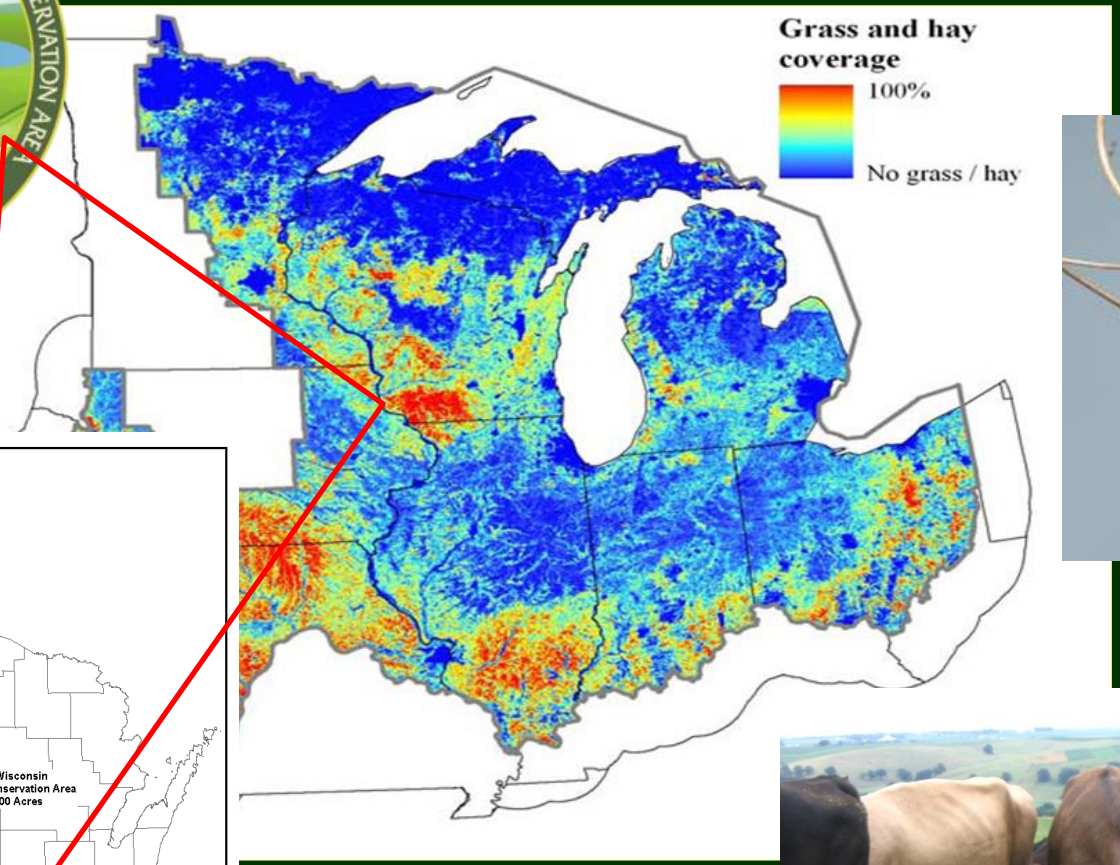
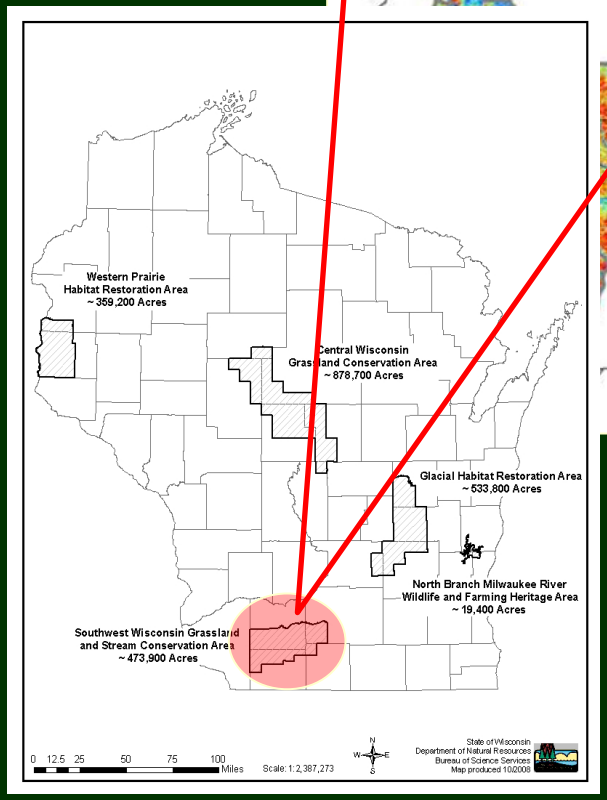
WI Bird Conservation Initiative Conference
March 19-21, 2015

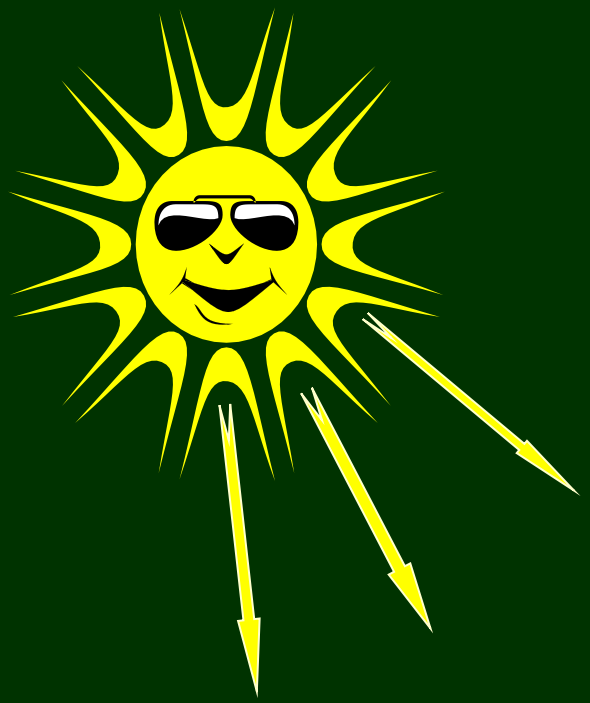


My background

WI Grassland Resources







Well-managed grazing systems can be part of the solution

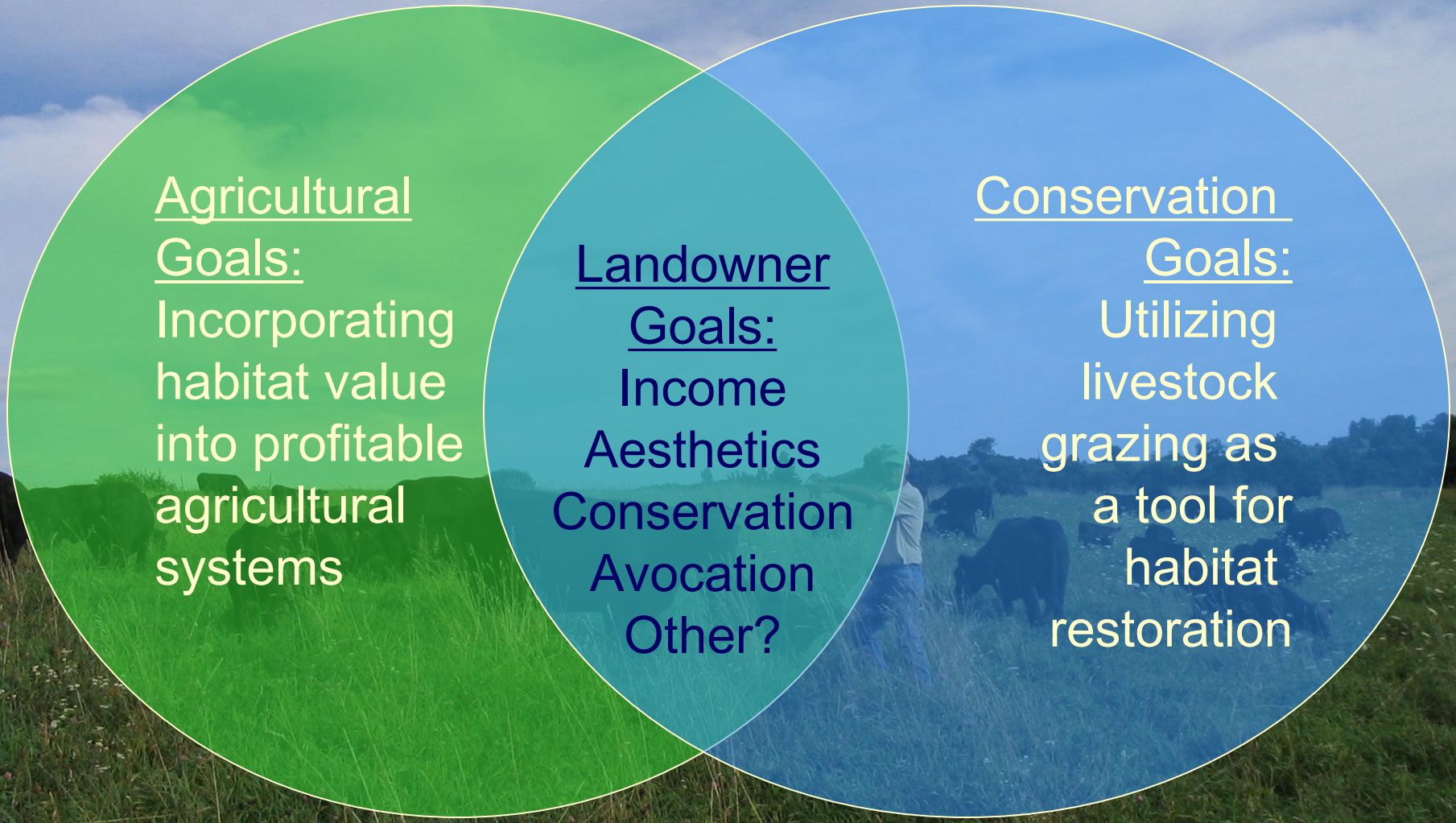
- Control Soil Erosion
- Protect Water Quality
- High Quality Wildlife Habitat

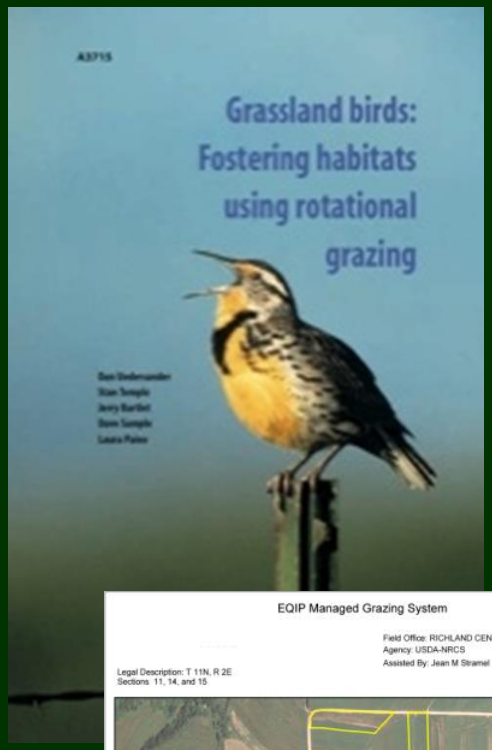
Delivering Ecosystems Services

The Grazing Broker Project

An estimated 60% of land in the region is owned by non-farming landowners

Non-farming landowners



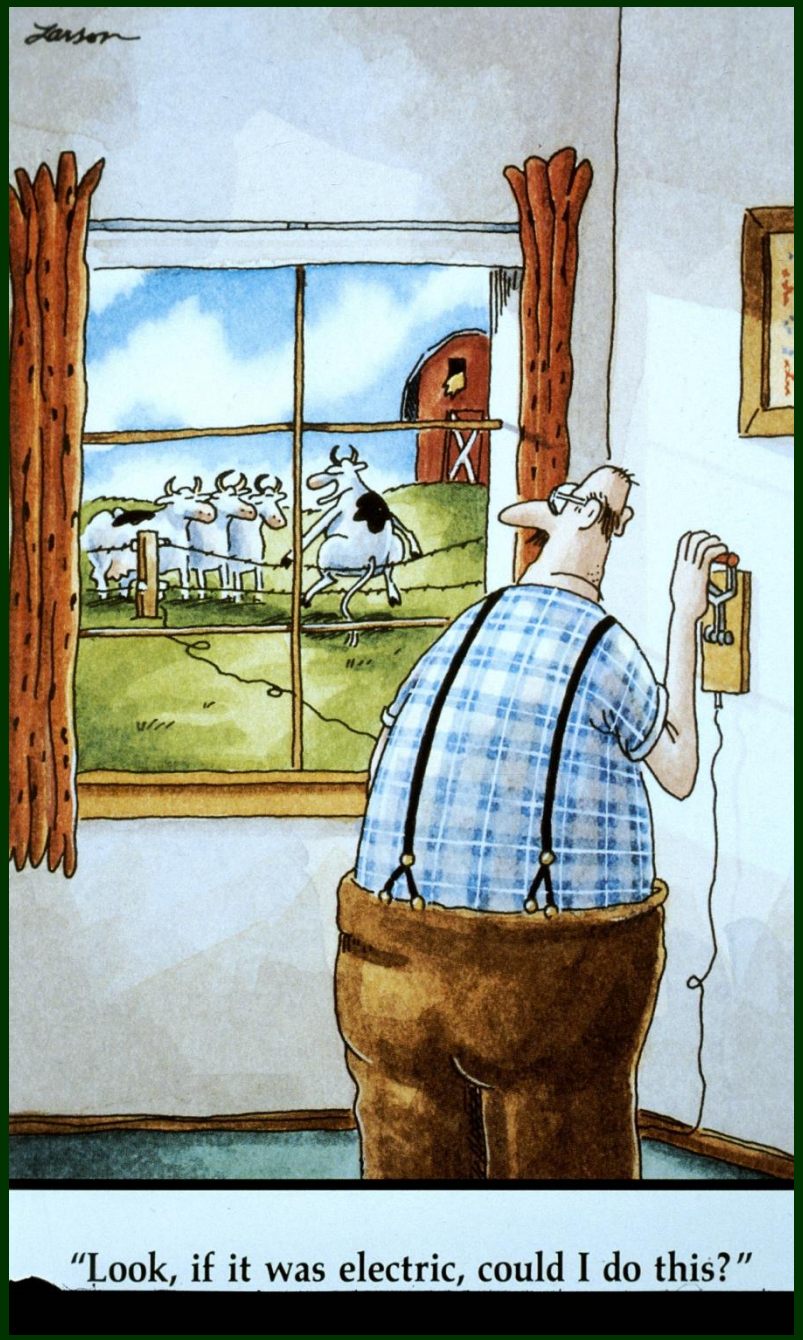


Grazing Broker Assistance

- Database of producers & landowners
- Facilitating relationships
- Grazing planning
- Conservation assessment
- Lease templates
- Connecting with resources
- Business planning

What is managed grazing?

- Maximize pasture productivity and quality by using rotational grazing
- Maximize utilization of pasture
- Minimize investment in infrastructure
- Let the cows do the work!



Management intensive grazing

- 30 days
- 1 paddock

- 30 days
- 30 paddocks

Rest-Rotation Continuum

- Higher quality
- Higher yield
- More diversity
- More flexibility

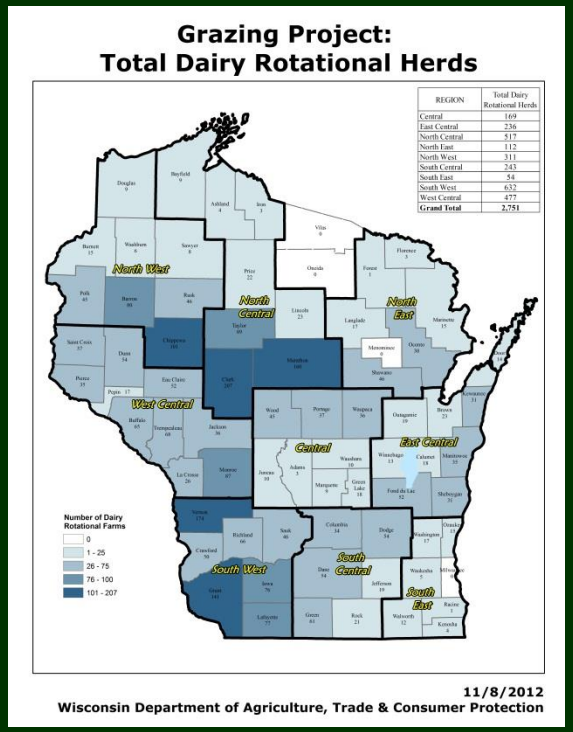
How does managed grazing work?

Dairy and Beef Grazing in WI

from 2007 Census of Agriculture & 2010 grazing surveys

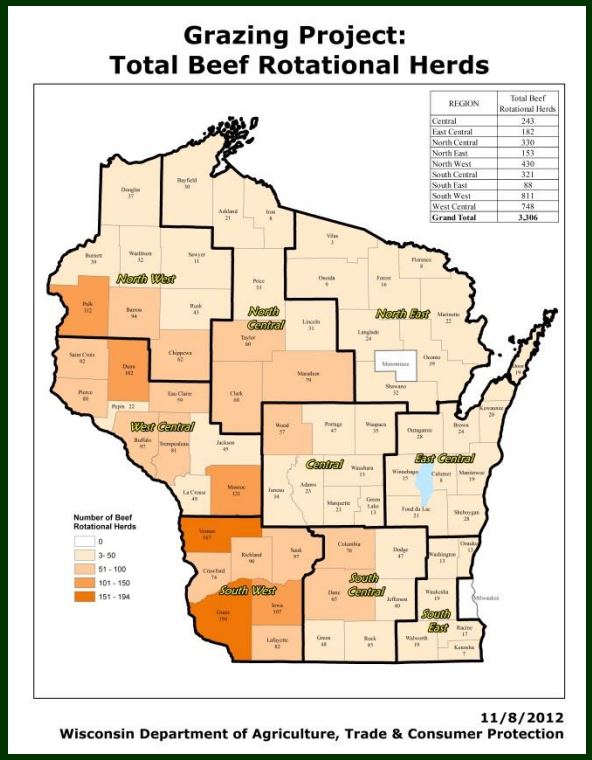
Dairy Grazing Survey

- # of MIG farms: 3070
- 22% of dairy farms in WI
- Average herd size: 61 cows
- Land owned: 246 acres



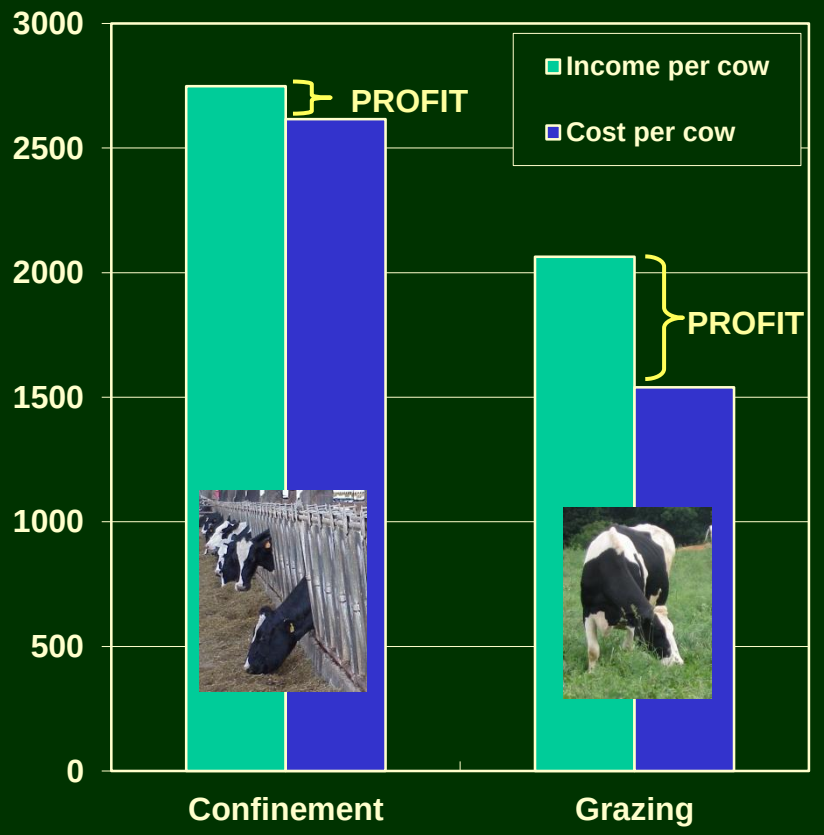
Beef Grazing Survey

- # of MIG farms: 4763
- 42% of beef farms in WI
- Average herd size: 27
- Land owned: 203 acres



Three ways to increase profit

- Increase production
- Reduce cost of production
- Produce and sell into a premium market



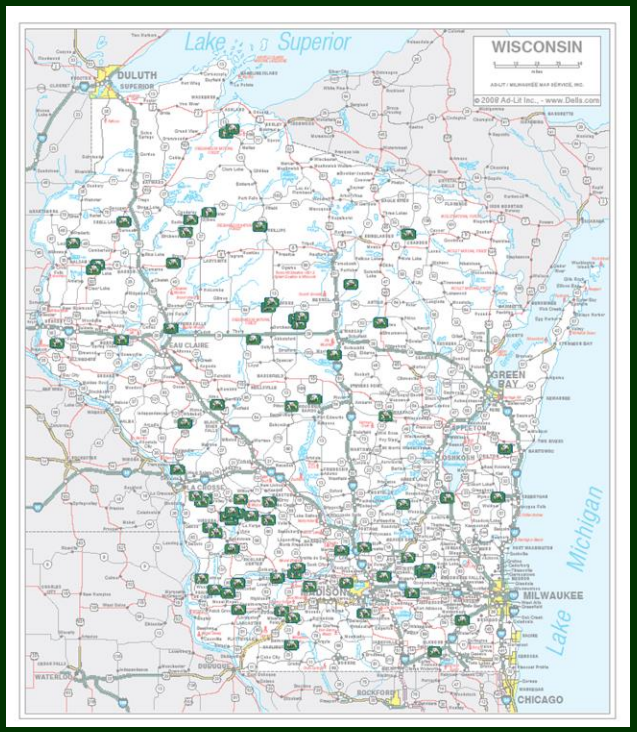
“Terroir”

Terroir refers to a region, whose plants, soil, & microclimate impart distinctive qualities to food products.

Grass-fed meats

- National sales
- 1998:
  - 100 producers
  - $3-4 million in sales
- 2014
  - 3500 producers
  - $550 million in sales
  - >$2 billion in imports

Wisconsin Grass-fed Beef Cooperative

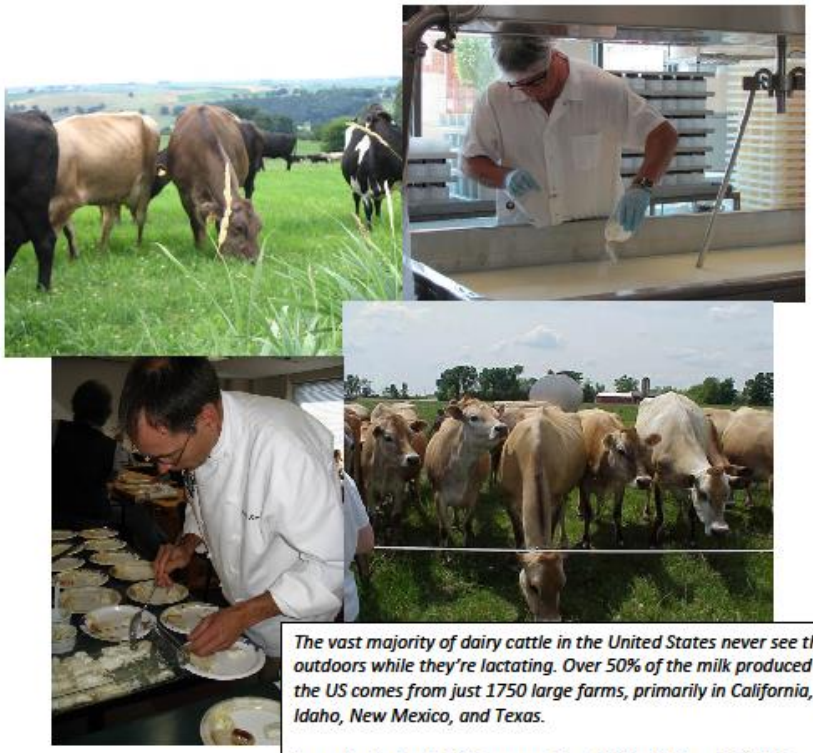


- Incorporated on June 27, 2008
- Currently have 120+ members
- Selling beef to food coops, grocery stores, restaurants, and meat markets in Southern WI.
- 2014 sales ~$1.2 million

Pasture milk is different

Growing the Pasture-Grazed Dairy Sector in Wisconsin

Summary of findings and recommendations



The vast majority of dairy cattle in the United States never see the outdoors while they're lactating. Over 50% of the milk produced in the US comes from just 1750 large farms, primarily in California, Idaho, New Mexico, and Texas.

In contrast, about 22% or more than 3000 of Wisconsin's dairy farmers use managed grazing. Can the unique features of milk from pastured cows contribute to the resurgence of an artisan dairy tradition?

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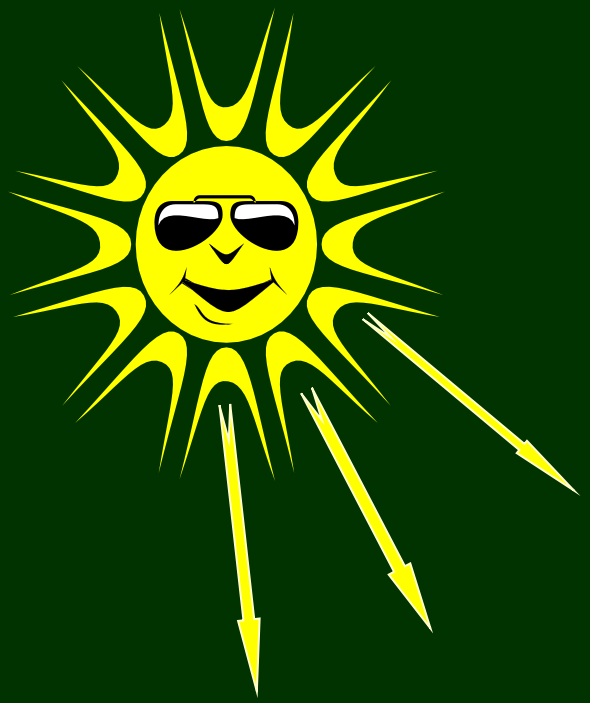
Grass-based dairy products: challenges and opportunities

Prepared by:
Laura Paine
Wisconsin Department of Agriculture, Trade and Consumer Protection

Published by the UW-Madison Center for Integrated Agricultural Systems

August, 2009

- **Available at:**
- **http://datcp.wi.gov/Farms/Grazing/Grass_Fed_Market_Development/index.aspx**
- **http://www.foodsci.wisc.edu/pasture_grazed_dairy/**



Not only is it profitable and tasty…

- Control Soil Erosion
- Protect Water Quality
- High Quality Wildlife Habitat

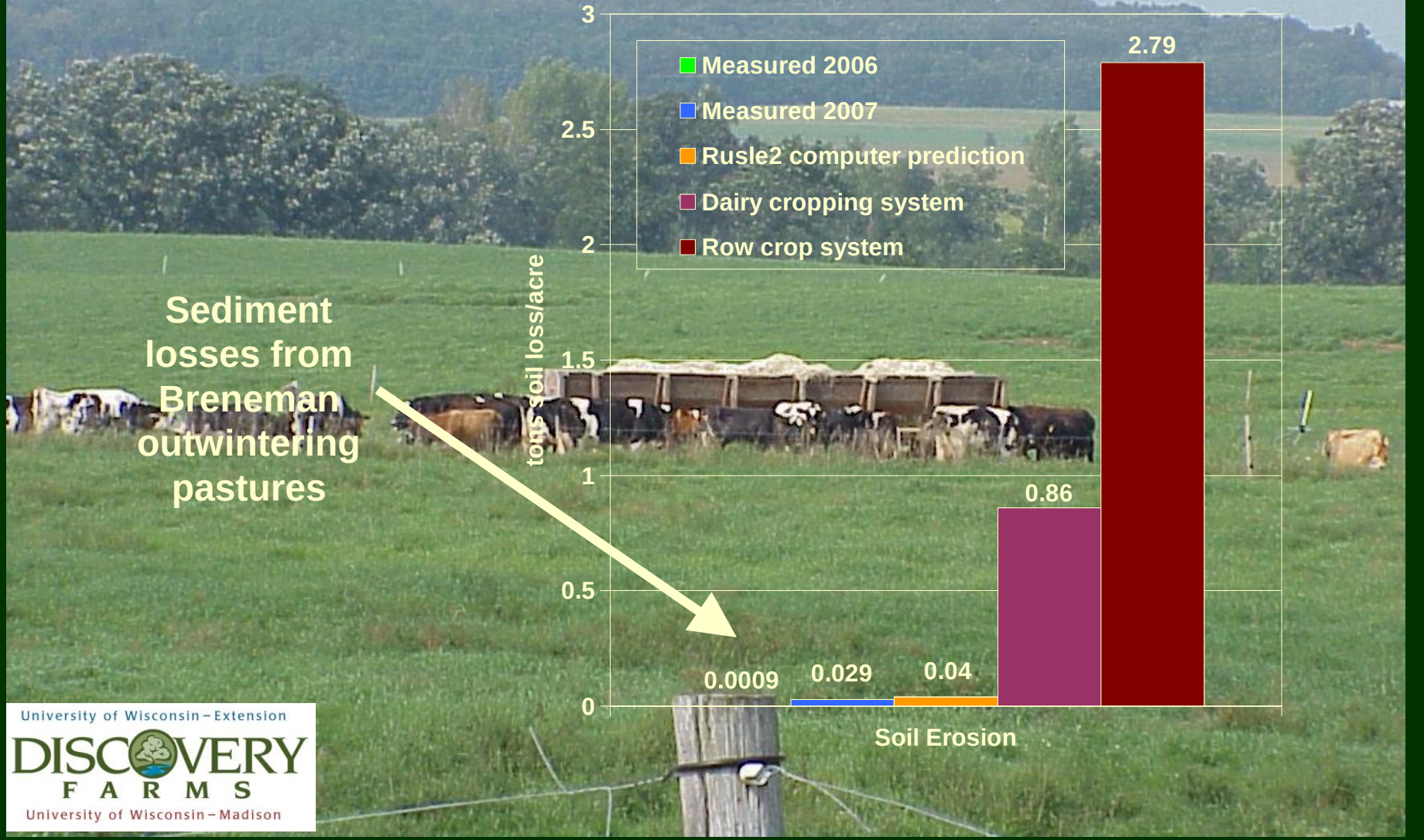
Delivering Ecosystems Services

Conservation Goals

	Soil Erosion Water Quality	Wildlife Habitat	Ecological Function	Ecosystem Restoration
Necessary Features	Sod Cover, Reduced Ag Chemical Inputs	Habitat Structure Patch size	Energy Flow Mineral Cycling Water Cycling Biodiversity	Plant & Animal Biodiversity
Scale	Field	Field or Farm	Farm or Landscape	Landscape
Appropriate Species	Warm Season or Cool Season Grasses	Warm Season or Cool Season Grasses	A Diverse Array of Plant and Animal Species	Native local ecotypes & species
Compatible with well-managed grazing?	Yes	Yes	Yes	Yes

Soil Erosion Control

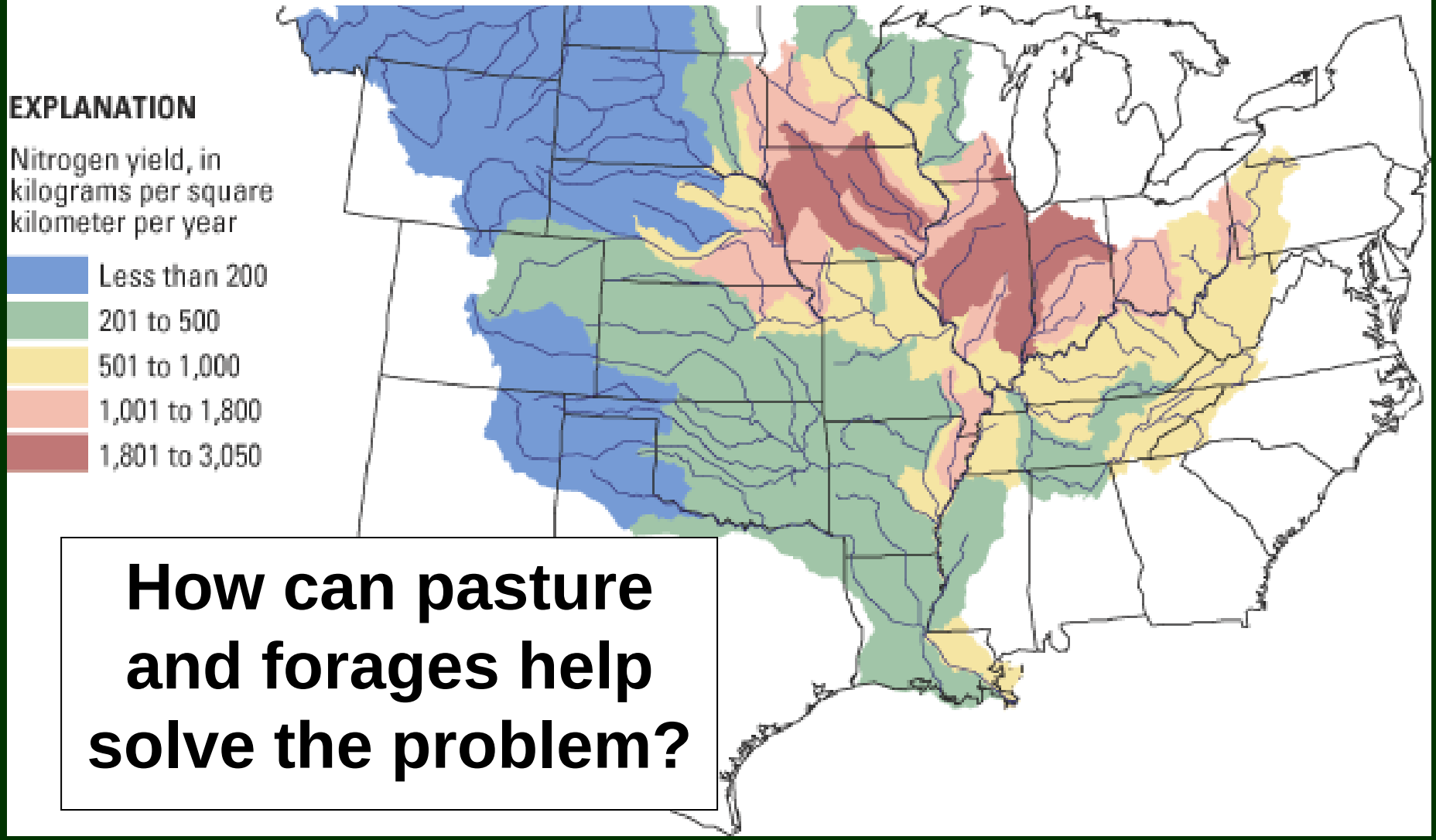
data from Breneman Discovery Farms project



Sediment losses from Breneman outwintering pastures

University of Wisconsin – Extension
DISCOVERY FARMS
University of Wisconsin – Madison

Water Quality and Hypoxia



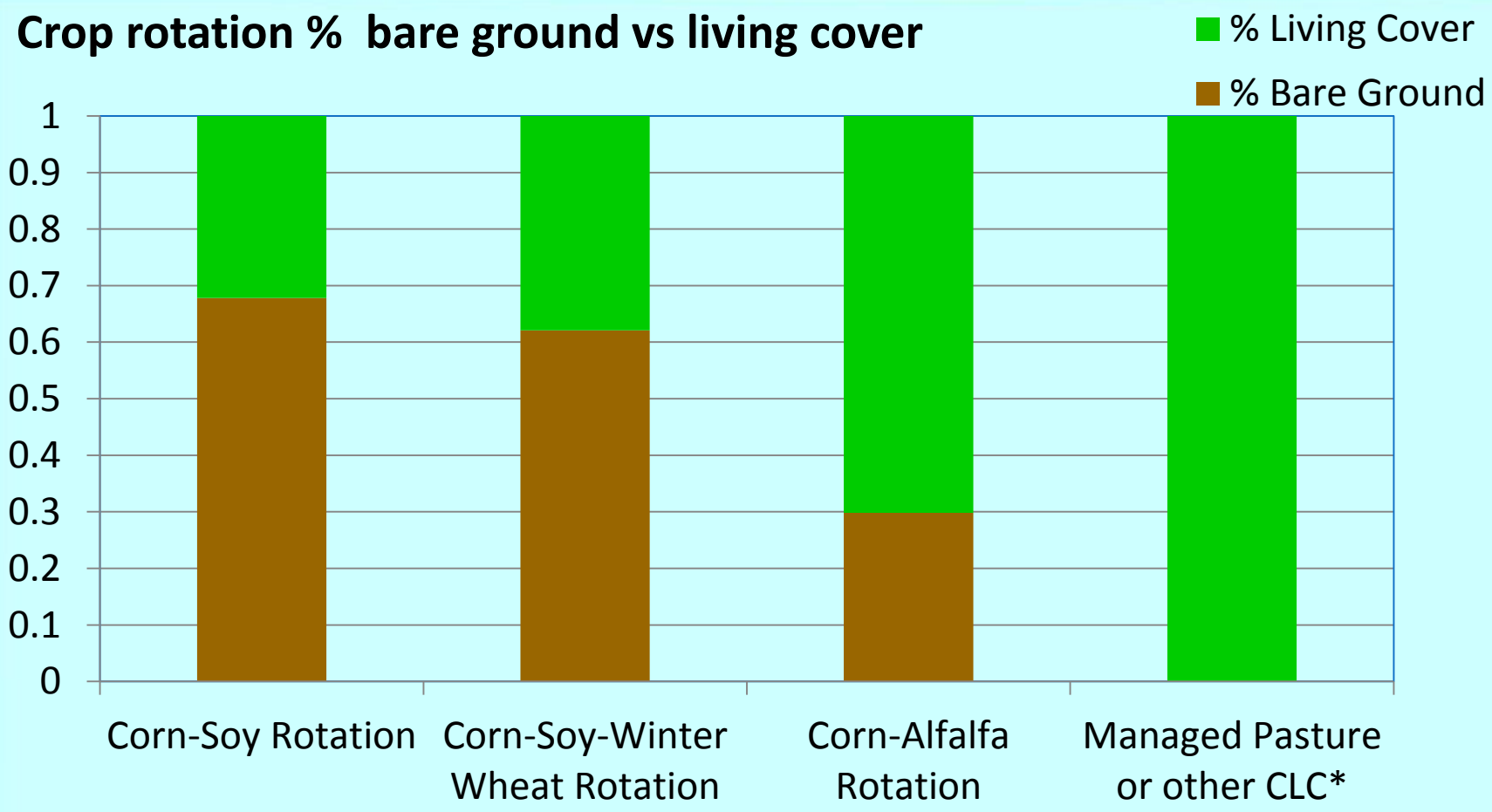
How can pasture and forages help solve the problem?

Green Lands Blue Waters

Mission: To support development of and transition to a new generation of agricultural systems that integrate more perennial plants and other continuous living cover in the agricultural landscape.

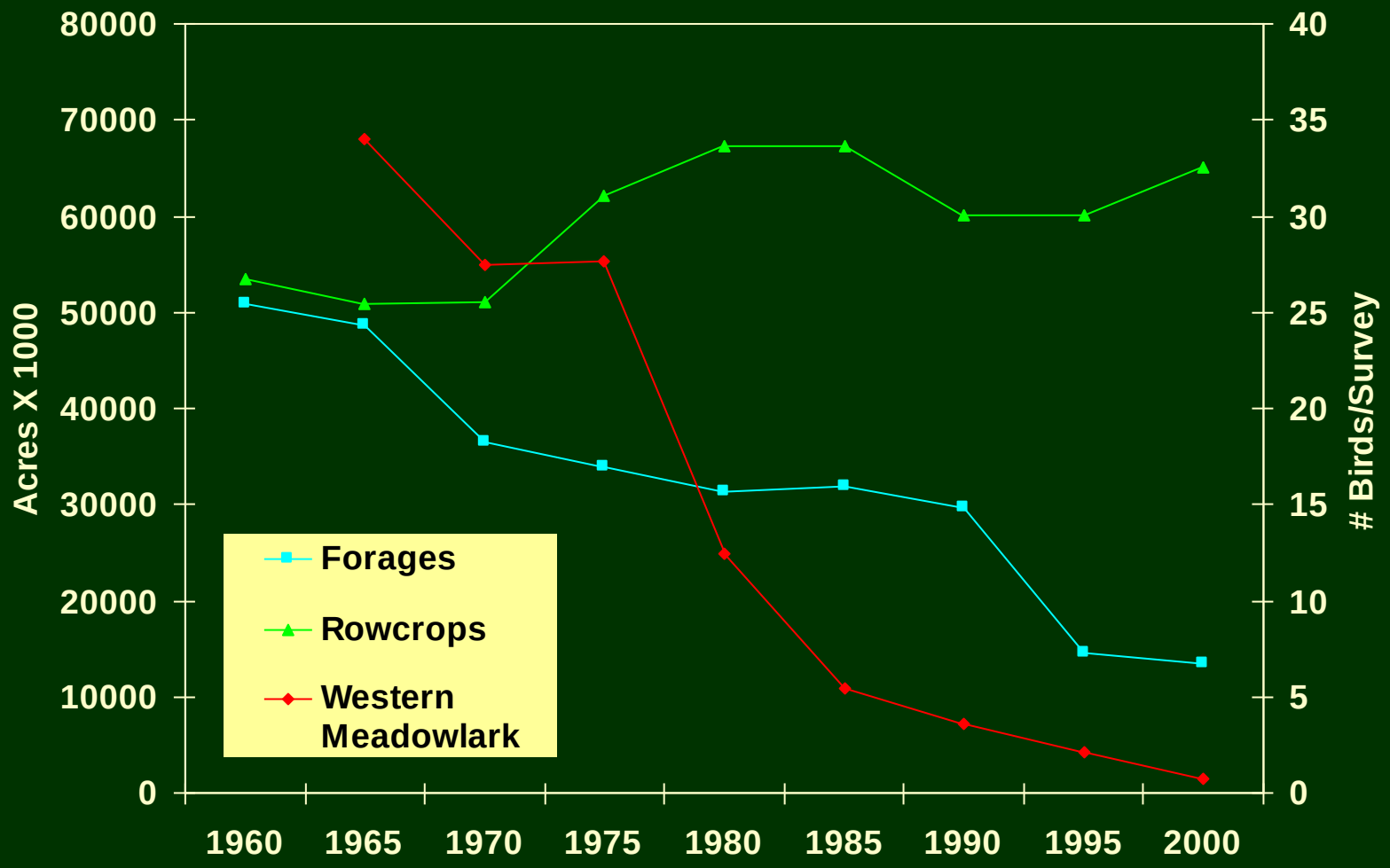
- Perennial forages
- Perennial bioenergy crops
- Perennial grains
- Agroforestry
- Cover crops

What is continuous living cover?



- **Corn-Soy 2 yr. rotation**
- **Corn-Soy-Wheat 3 year rotation**
- **Corn-Alfalfa-Alfalfa-Alfalfa 4 year rotation**

Forages contribute to wildlife habitat









Managing for habitat goals

Management intensive grazing is a flexible system

- 30 days
- 1 paddock

- 30 days
- 30 paddocks

Rest-Rotation Continuum

- Higher quality
- Higher yield
- More diversity
- More flexibility

Improving Riparian & Aquatic Habitat

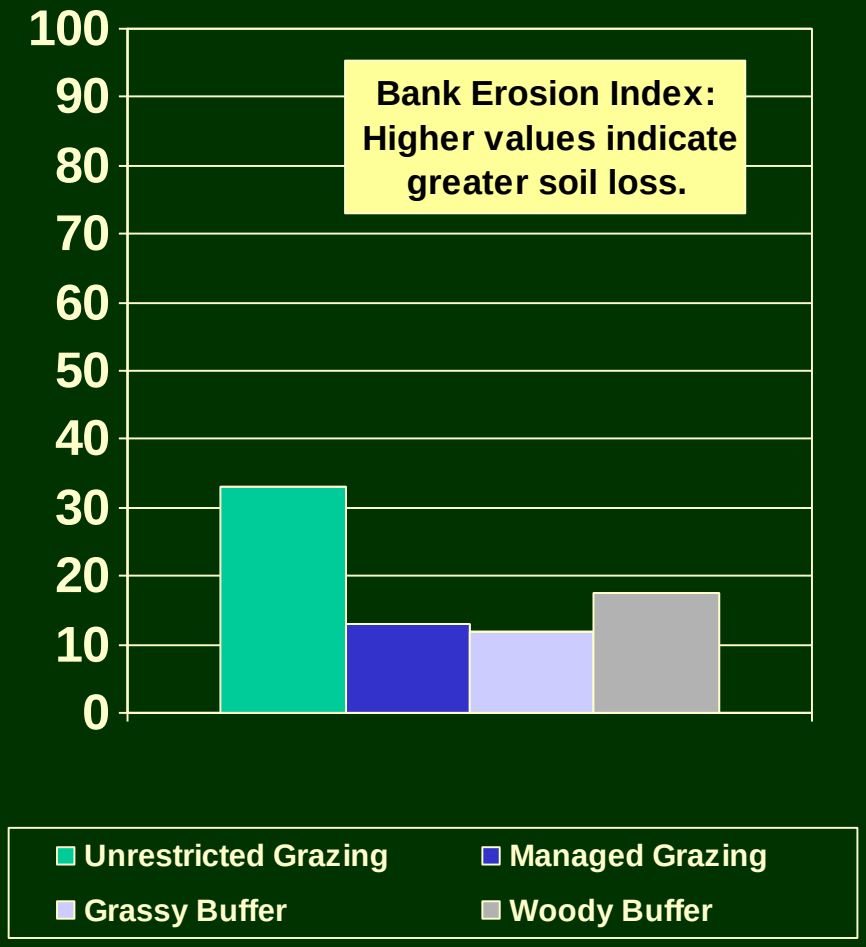
Grassy Buffers

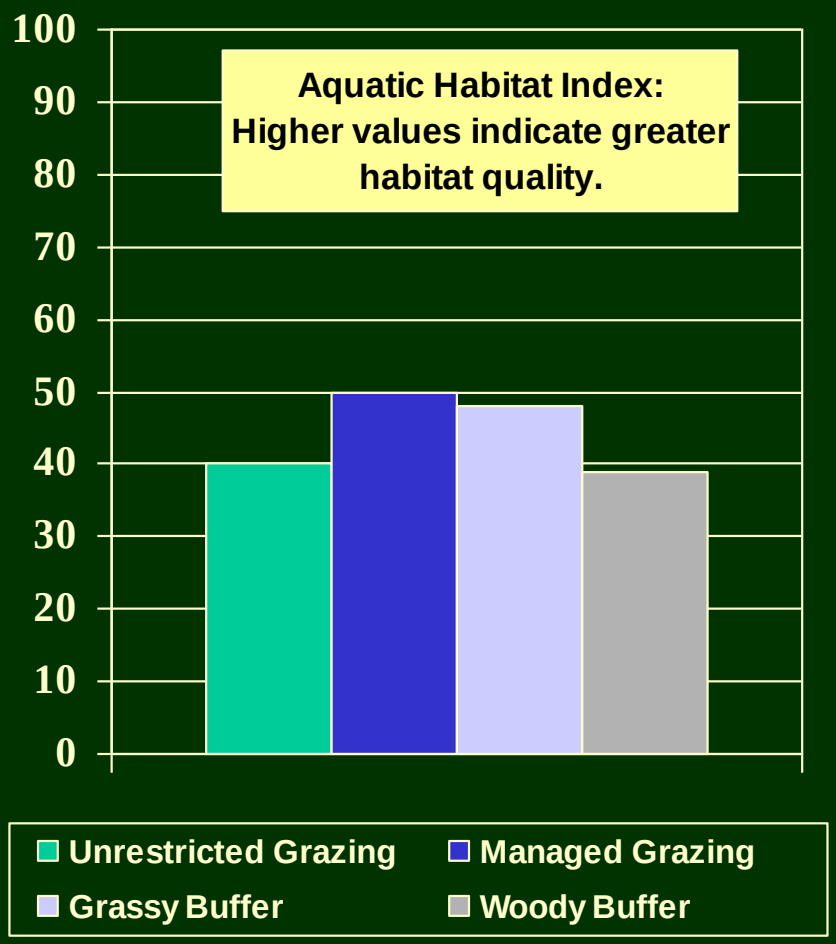
Managed Grazing

Unrestricted Cattle Access

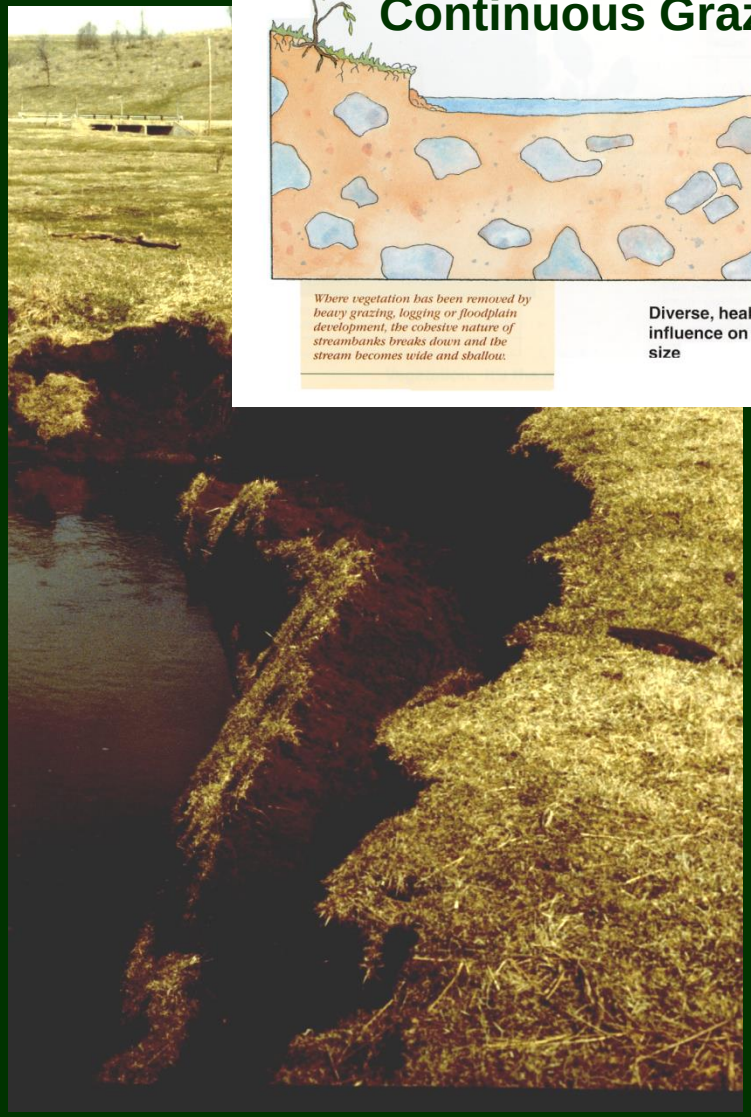
Woody Buffers

Improving Aquatic Habitat





Aquatic Habitat & Bank Stability

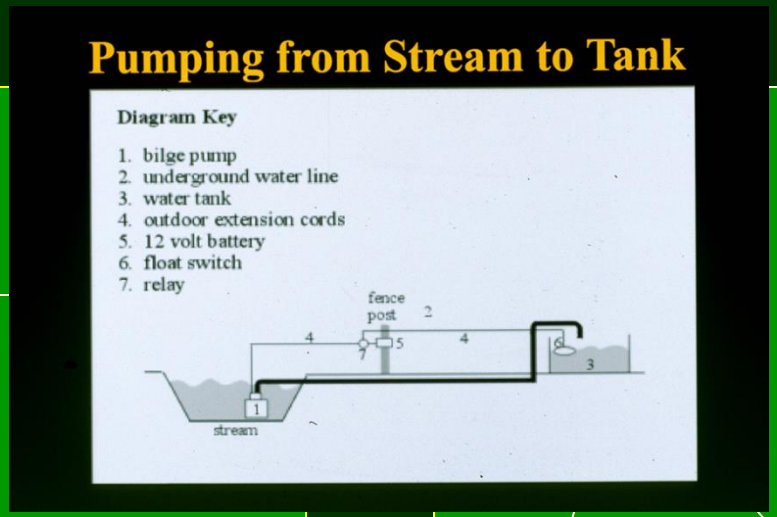


Managing livestock behavior

Constructed crossings allow animals safe access to water and protect streambanks

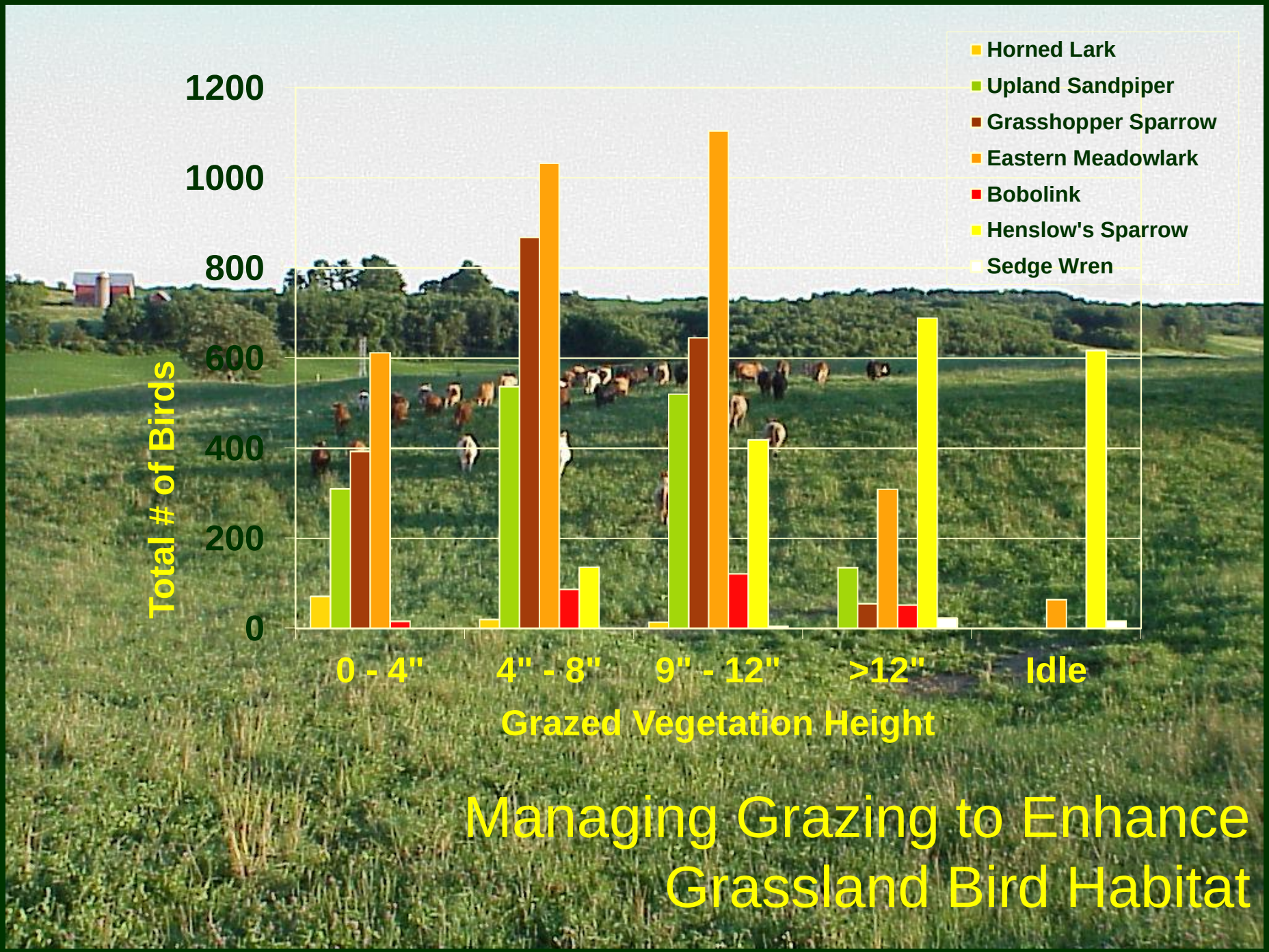
- Place where animals like to cross.
- Use gravel, geotextile, or cement, depending on conditions.
- Use 1.5” rock.

Managing Riparian Pastures



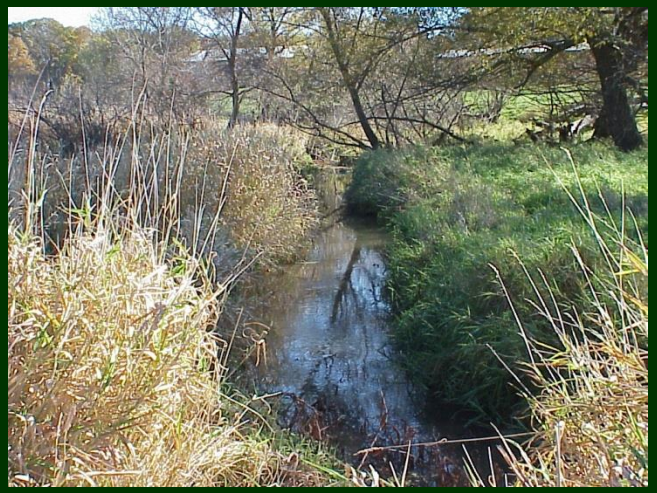
Grassland bird habitat needs

- Cover (shelter) from weather and predators
- Food and water
- Space to obtain food, water, and to attract a mate

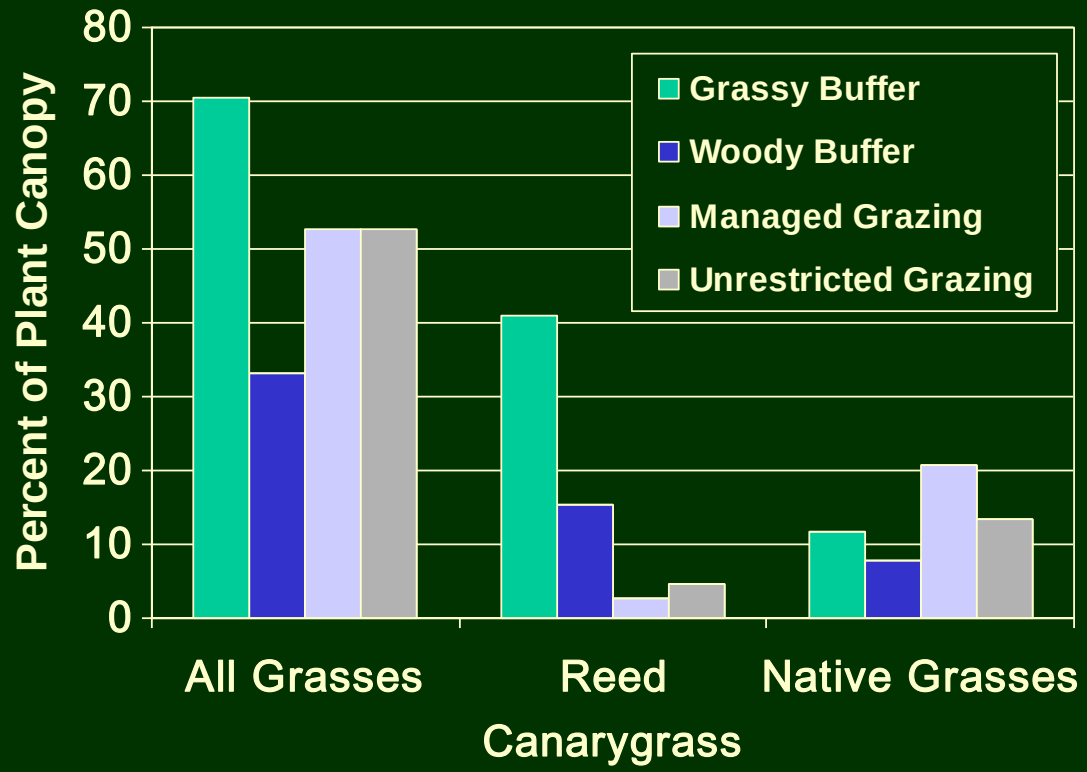


Managing Grazing to Enhance Grassland Bird Habitat

Manging grazing to control invasive weeds



Grazed sites had more native grasses and sedges and less reed canarygrass, an invasive species in riparian areas and wetlands.

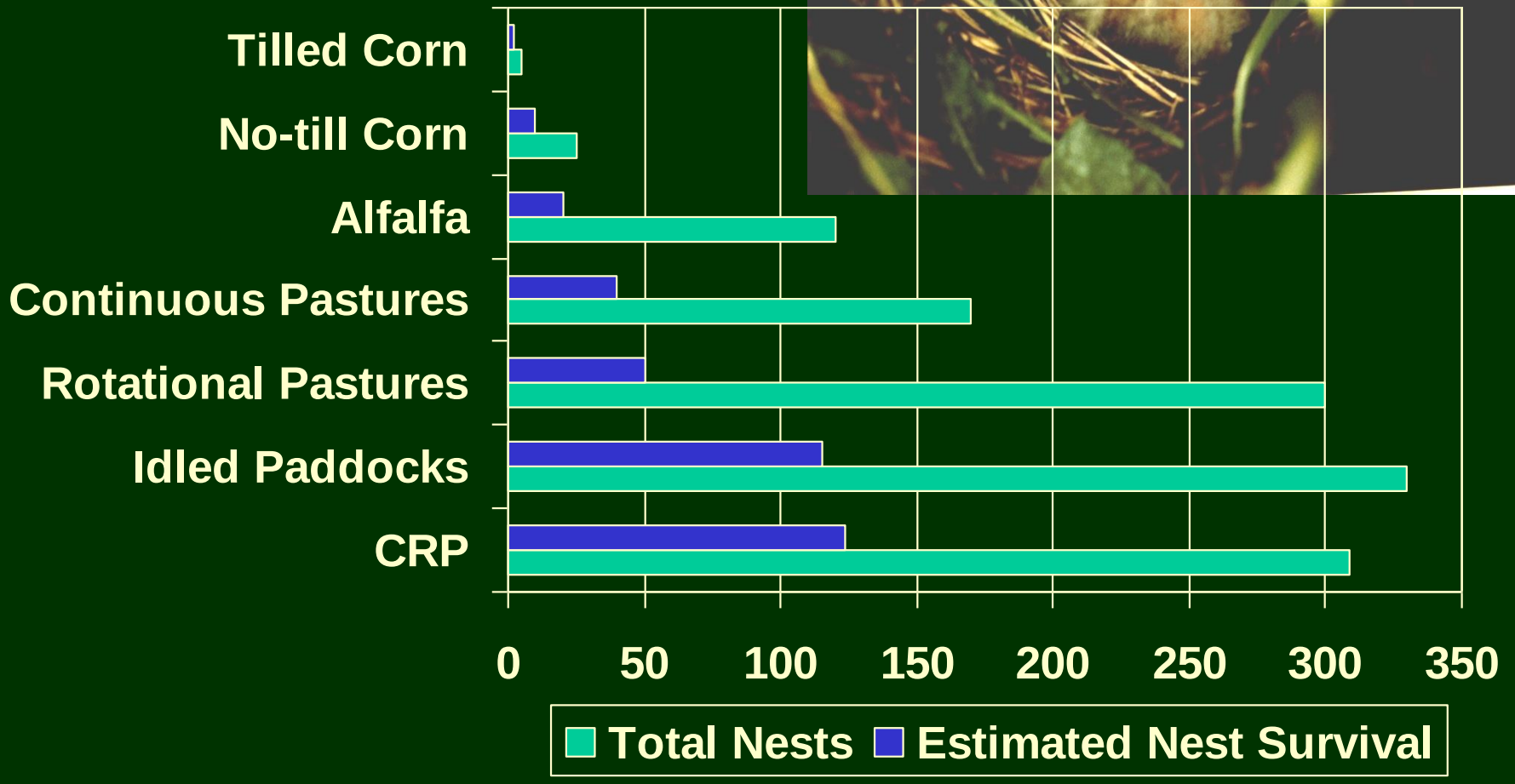



Mob Grazing
1,000,000 lbs per Acre

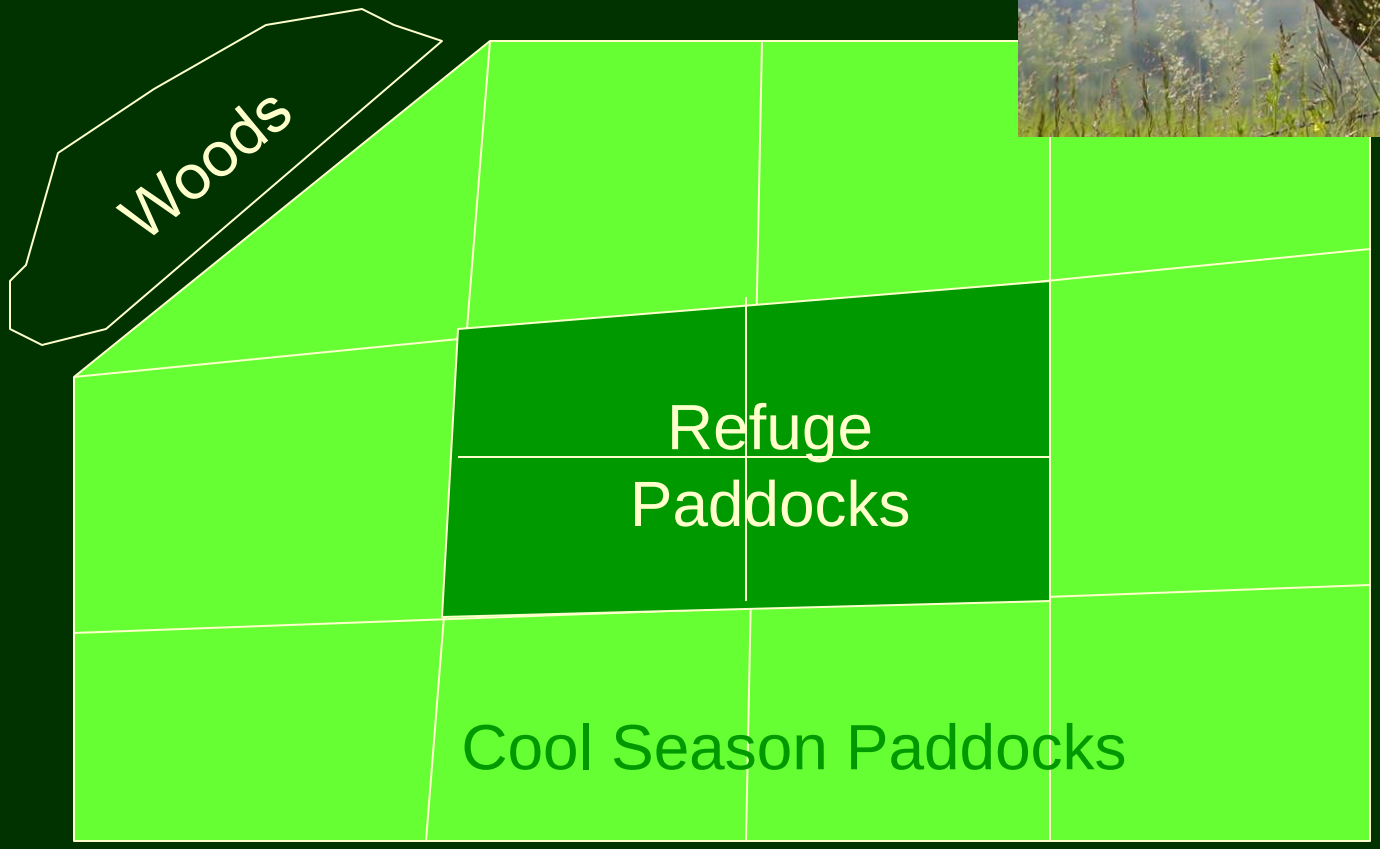
Training your animals to be weed eaters

Habitat restoration using goats

Making Compromises: Nest Survival



Creating a Nesting Refuge



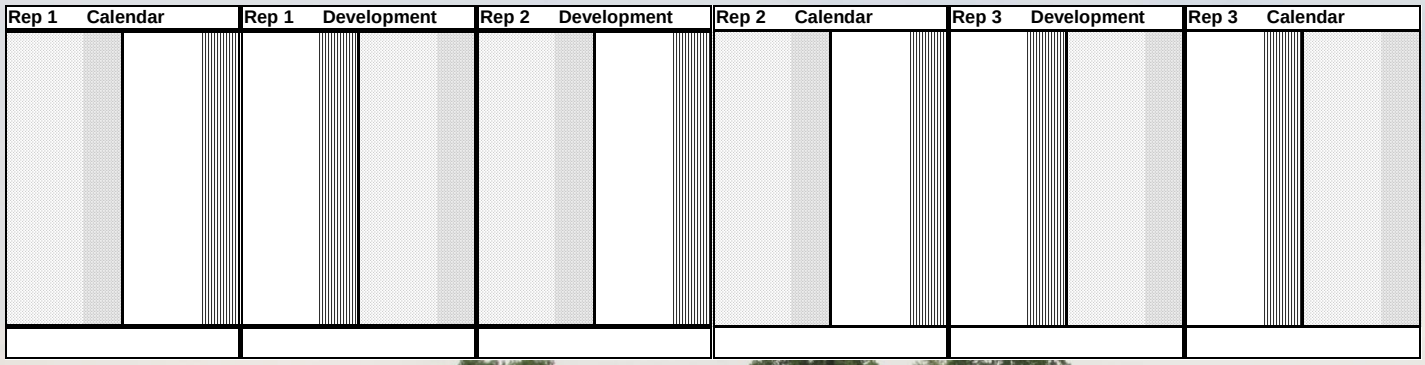
Grassland bird nesting season: May and June

Nesting ‘Refuges’:
for the birds

- **Create one or more large idle areas rather than a lot of small ones.**
- **20 acres is a good minimum size, up to ¼ of a pasture area.**
- **Locate in the center of open areas, away from trees, buildings, and roads**
- **Defer grazing for 6 weeks or more between May 1 and July 15.**
- **Harvest area for hay following idle period**

Native Warm Season Pastures for Nesting Birds

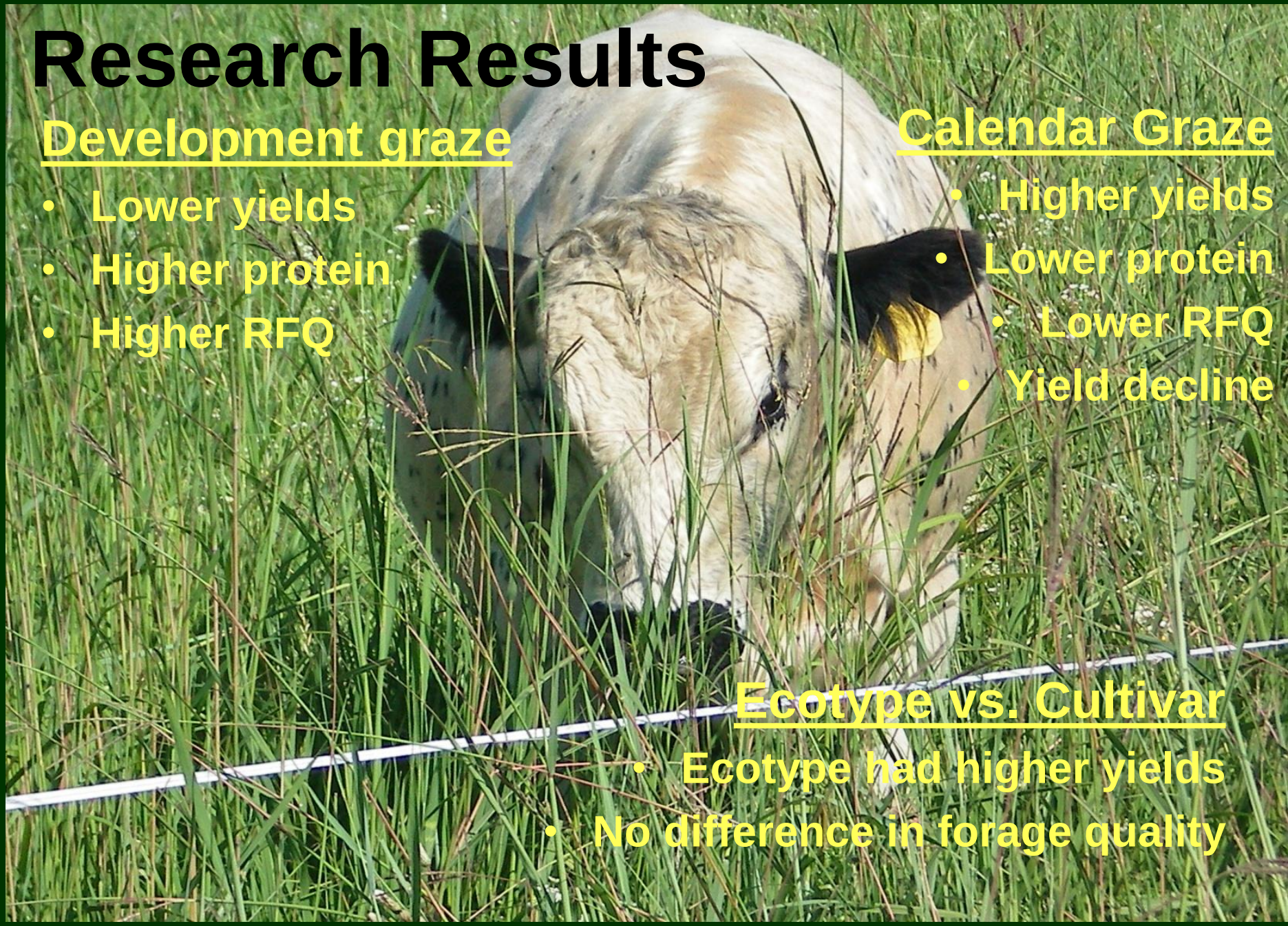
On-going warm season pasture research



Research Questions

- Improving our chances for successful establishment
  - Are current seeding rates appropriate?
  - Can we improve stand establishment by using named varieties?
- Maintaining a productive stand
  - Are named varieties or local ecotypes better suited for pasture use?
  - What are the best grazing timings for optimizing yield and quality?

Research Results



Development graze

- Lower yields
- Higher protein
- Higher RFQ

Calendar Graze

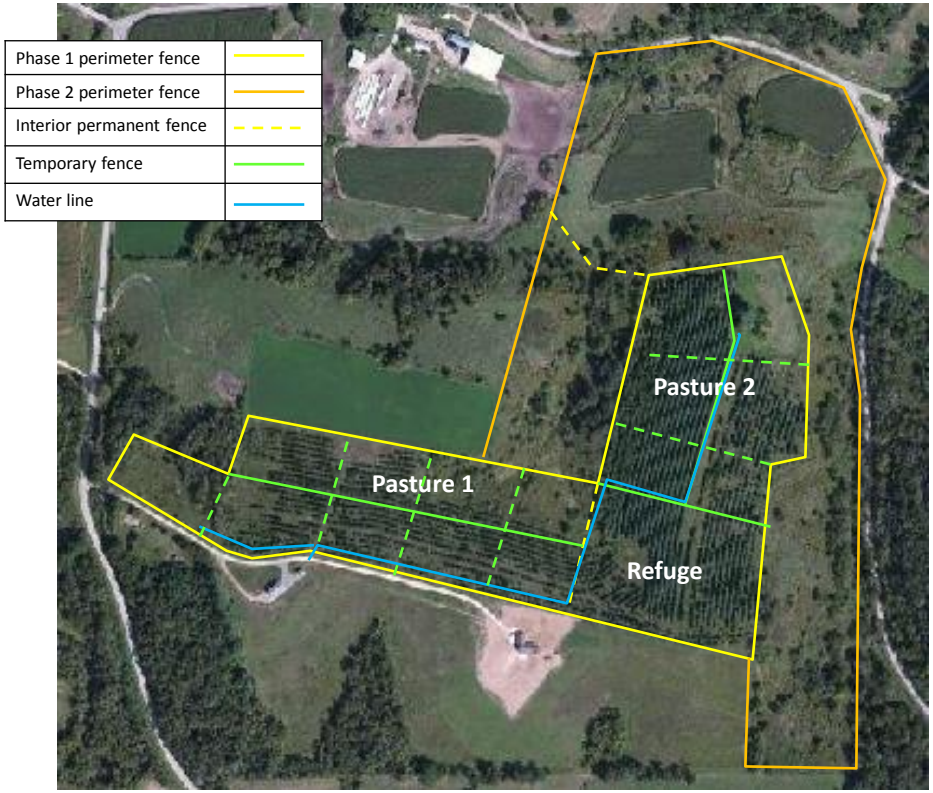
- Higher yields
- Lower protein
- Lower RFQ
- Yield decline

Ecotype vs. Cultivar

- Ecotype had higher yields
- No difference in forage quality

Case History

David Anderson Farm
Highland, WI



Refresh Values

Landowner Grazing Profile

03/13/2013

Landowner Information

David Anderson

5005 County Road II

Highland, WI 53543

608 935 7568 prairewind1@att.net

Property/Parcel Information

County: **Iowa**

Legal Description: Sec. 27 T7N - R2E

Parcel #: Tract 6001 farm 7772

Acres For Grazing: **65.4** Number of Fields: **2**

Land Management Goals:

Land Management Objectives:

Wants to form a bird refuge, likes the concept of managed grazing, wants to
possible, and generate enough income
n investment.
ap):
r of the grazing unit to protect nesting
ent:
out cost share options and eligibility.
nd owner has applied for cost sharing
n.
, water, inter-seed with compatible
vith a neighbor to rent his pasture and
roximately 11 - five acre paddocks.
in time.

Grazing Objectives

Landowner Involvement Rank: 3

Maintain and establish fences and paddocks, establish and maintain watering facilities, inter-seed and improve sward and cut or spray invasive weeds/brush.

Livestock types desired: Dry Cow

Duration of Grazing: 180

Term of Contract Desired: year to year

Grazing Management Plan: yes

Restrictions (Min Plant Res, Access, AUMs):

Landowner wants residual left at 3 inches and area in middle of pasture (9.2 acres) left uncut or grazed from May 1st to July 15th for nesting birds.

Worksheet)

erall):

re 31.1 acres of expired CRP with
wner has contracted to have cut and
Cassville, with bromegrass as the
re that has a lot of brush and invasive
wer

ds/Density/Legumes):

brush/weeds, density poor to good

Existing Infrastructure (See map):

Fencing, Watering Systems, Cattle Lanes, etc

Has a EQIP contract with NRCS for cost sharing fencing, watering system and seeding.

Dry Cow	
0.12	
24	
487,884	

Estimated Grazing Potential & Value:

Grazing Capacity (AU's):	**24**
Monthly Forage Need (lbs):	**43,200**
Rental Value (Per Month):	**$512.64**
Hay Price ($/ton):	**$178**

A Grazing-Conservation Partnership

Grazing streamside pastures

Managing pastures for water quality

Strategies for Seasonal Livestock Use

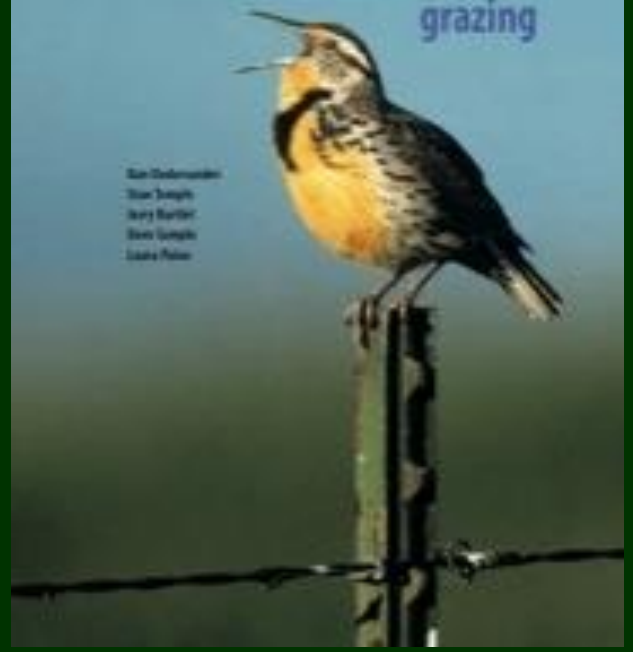
Managing pastures for water quality

Understanding Riparian Areas

Extension

A3715

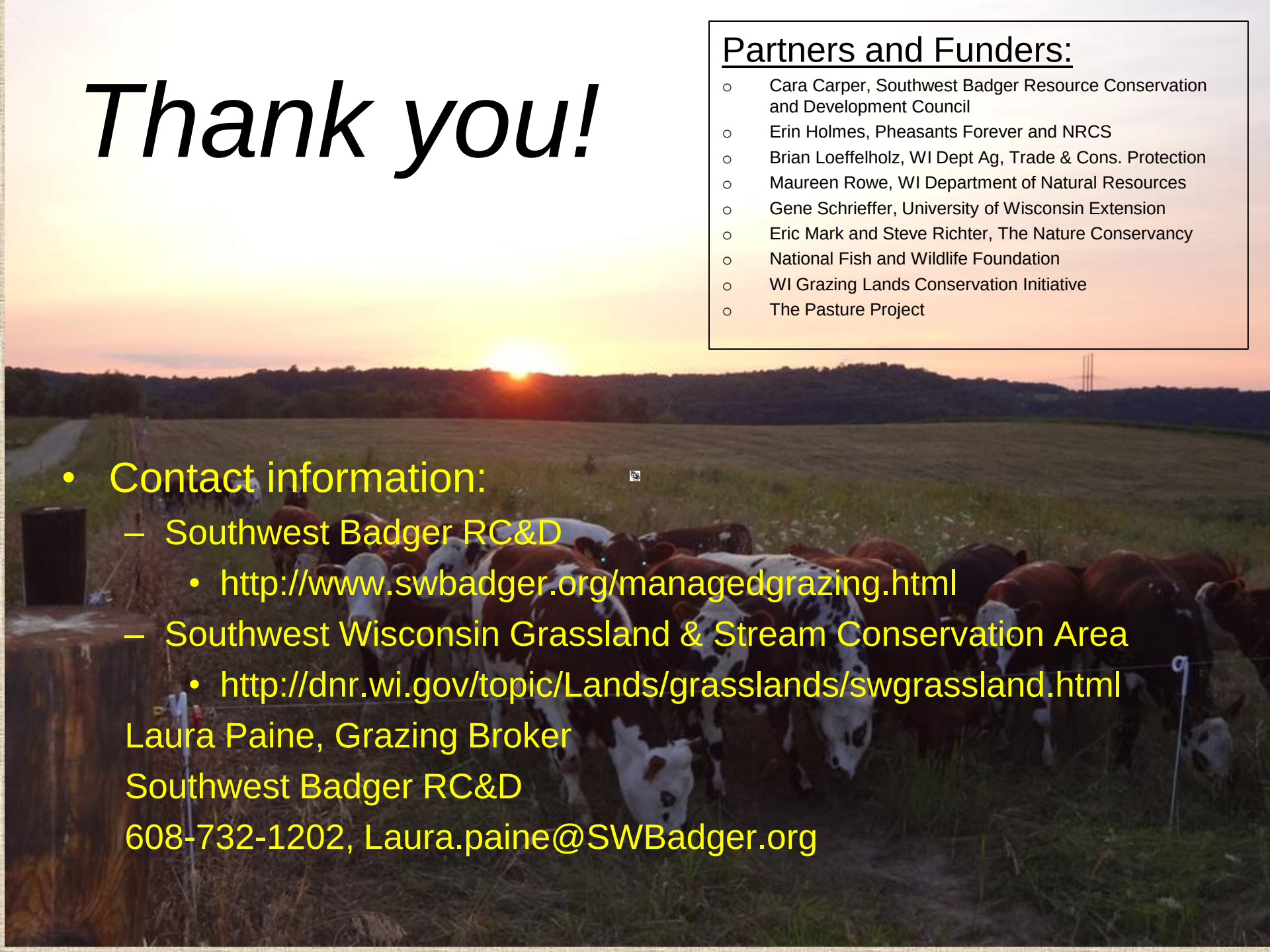
Grassland birds: Fostering habitats using rotational grazing



Thank you!

Partners and Funders:

- Cara Carper, Southwest Badger Resource Conservation and Development Council
- Erin Holmes, Pheasants Forever and NRCS
- Brian Loeffelholz, WI Dept Ag, Trade & Cons. Protection
- Maureen Rowe, WI Department of Natural Resources
- Gene Schrieffer, University of Wisconsin Extension
- Eric Mark and Steve Richter, The Nature Conservancy
- National Fish and Wildlife Foundation
- WI Grazing Lands Conservation Initiative
- The Pasture Project



- Contact information:
  - Southwest Badger RC&D
    - http://www.swbadger.org/managedgrazing.html
  - Southwest Wisconsin Grassland & Stream Conservation Area
    - http://dnr.wi.gov/topic/Lands/grasslands/swgrassland.html

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