



# *Coming* HOME

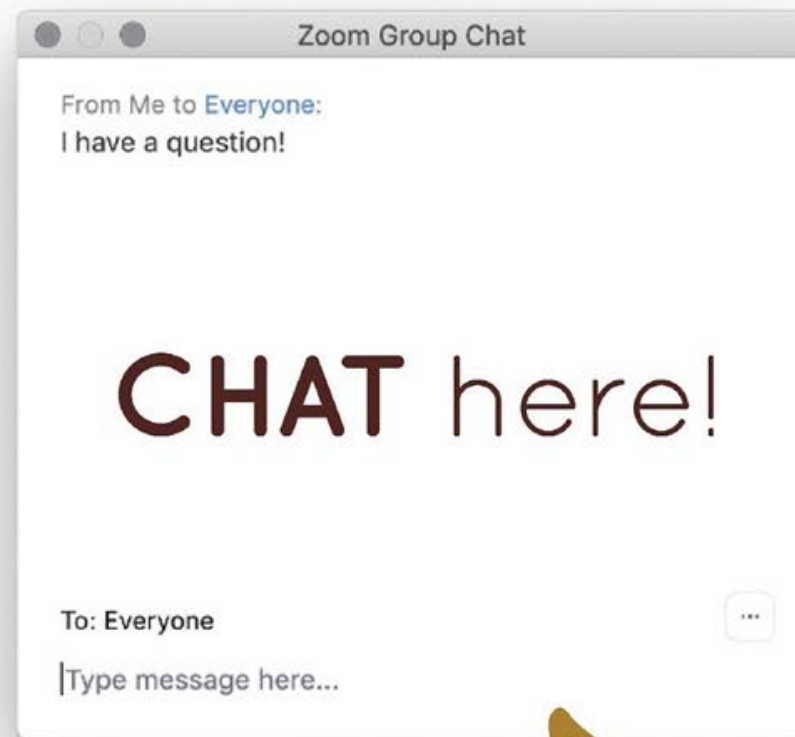
**Practical Farmers of Iowa  
Virtual Annual Conference  
January 21-23, 2021**



# Zoom Tools

Turn **AUDIO**  
ON/OFF

Turn **VIDEO**  
ON/OFF



Leave Meeting

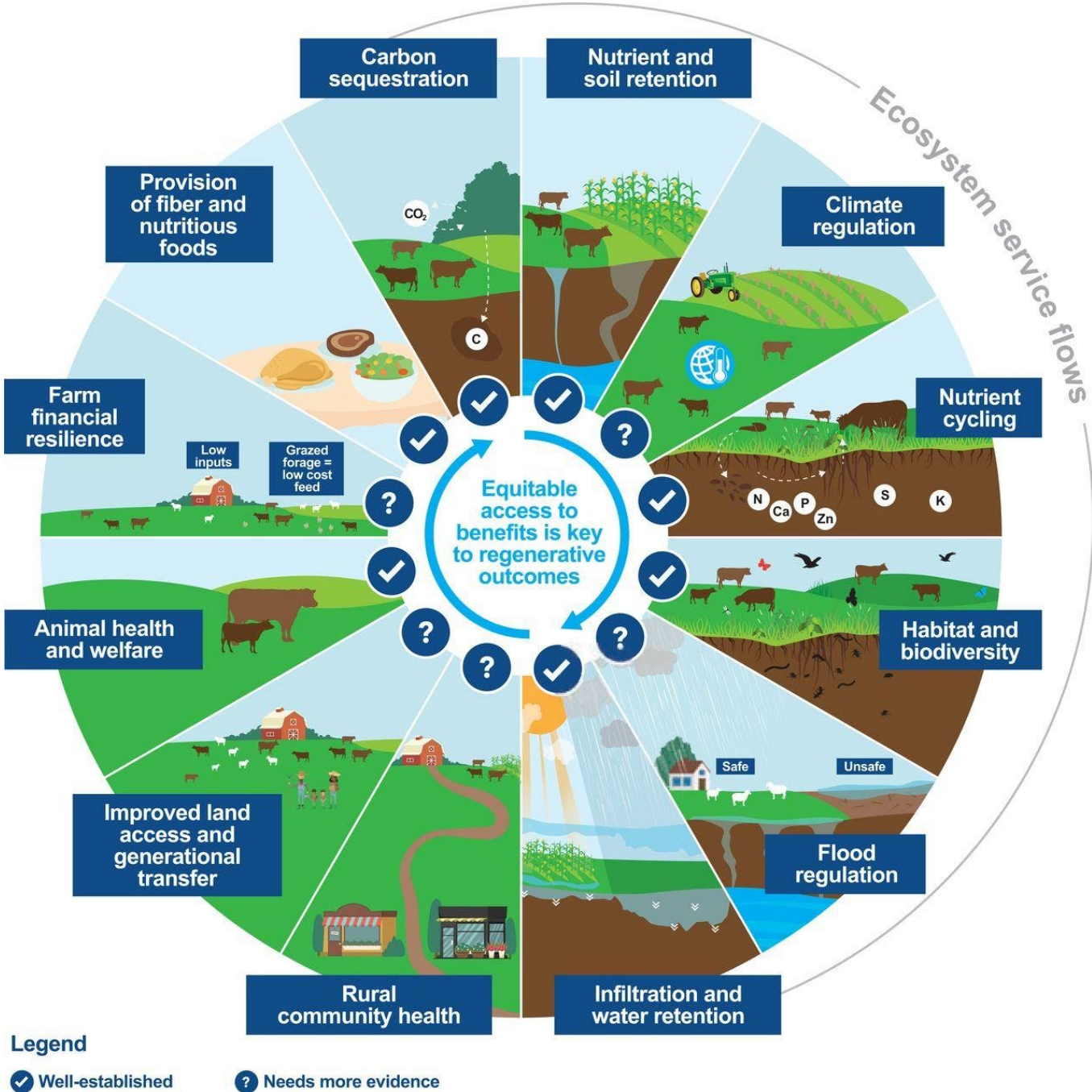




# Conceptualizing Large -Scale Livestock and Perennial Plant Integration

Practical Farmers of Iowa Annual Conference  
January 23, 2021

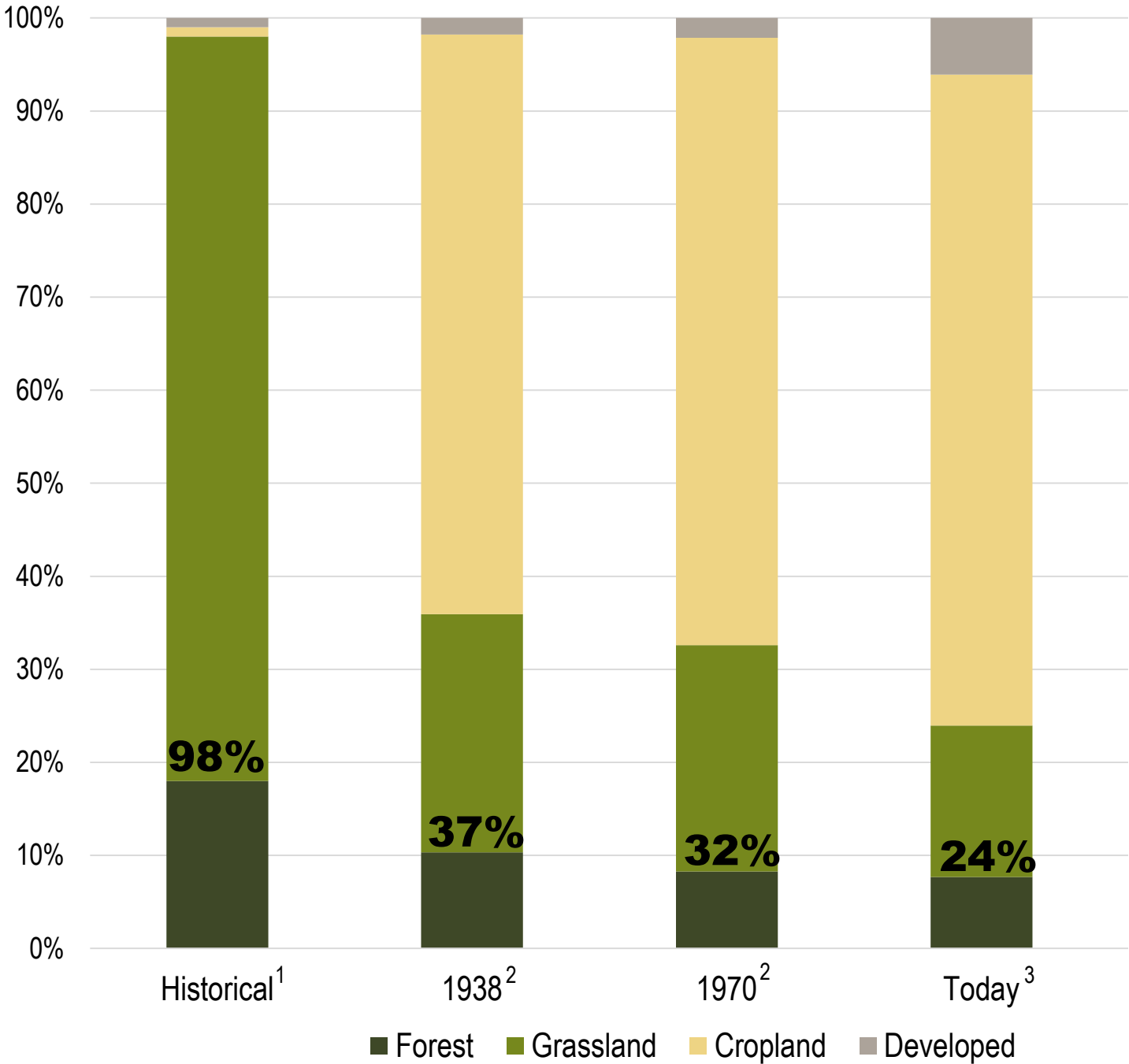
# Perennial systems are good for farms and society



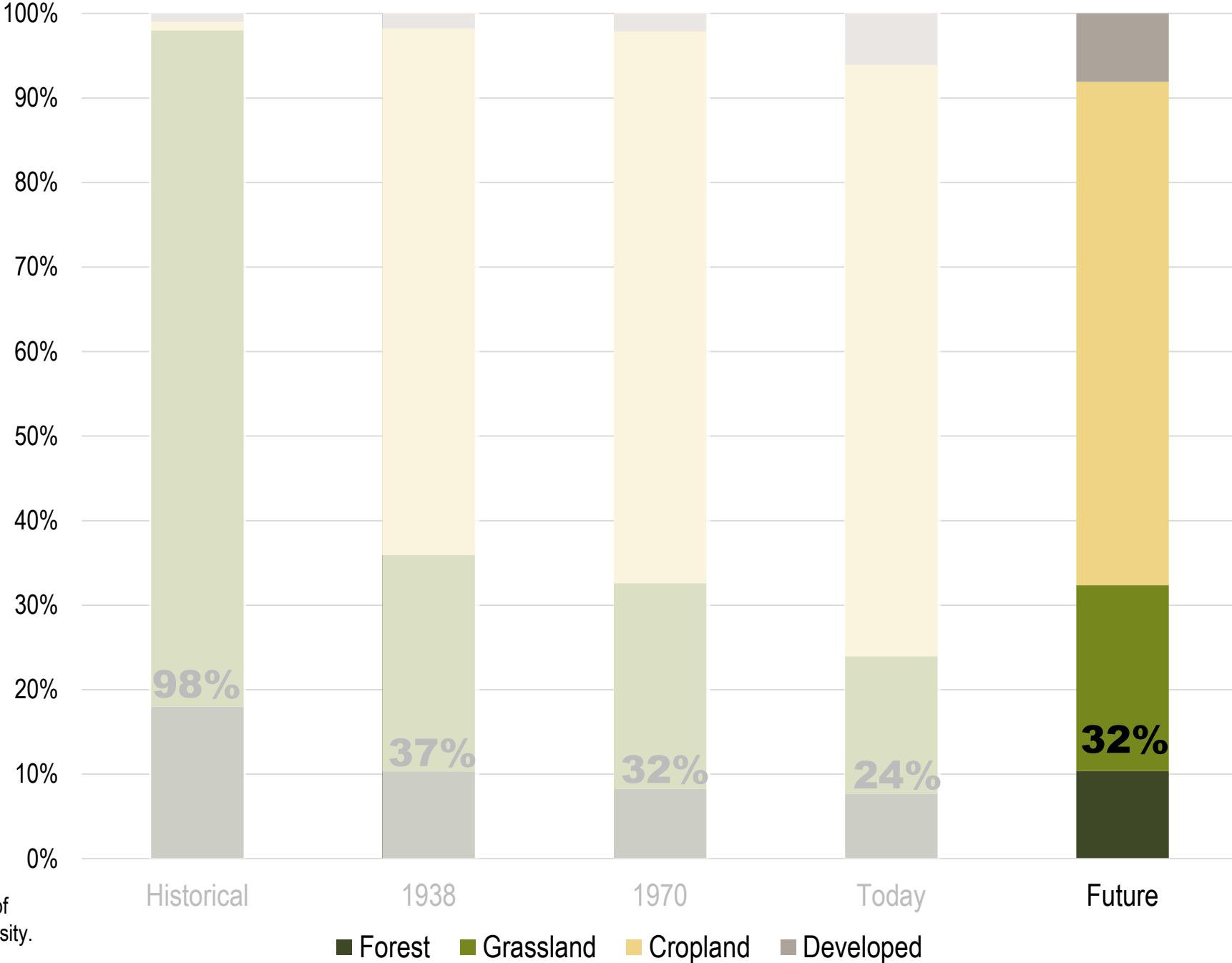
Source: Spratt et al. 2021. Accelerating regenerative grazing to tackle farm, environmental, and societal challenges in the upper Midwest. Journal of Soil and Water Conservation 76:15A.

# Perennial systems are in decline

Sources:  
<sup>1</sup>General Land Office Surveys, Iowa DNR;  
<sup>2</sup>Sohl et al. 2016. Modeled historical land use and land cover for the conterminous United States. Journal of Land Use Science 11:476-499;  
<sup>3</sup>Jin et al. 2019. Overall methodology design for the United States National Land Cover Database 2016 products. Remote Sensing 11:2971.



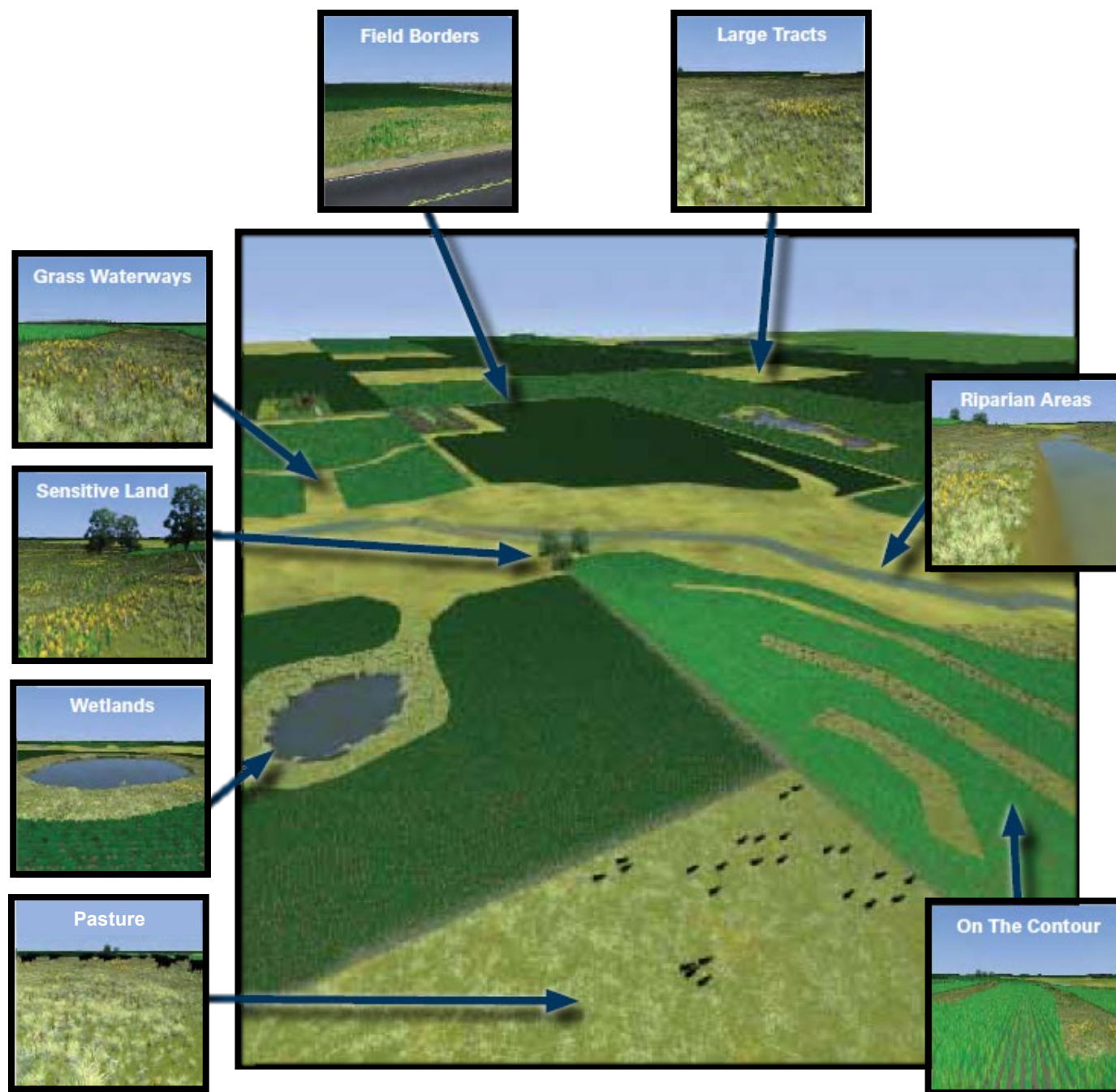
# Halting the decline?



Source: Larsen (2011) Farming for ecosystem services: a case study of multifunctional agriculture in Iowa, USA. MS Thesis, Iowa State University.



# Putting perennial systems in place







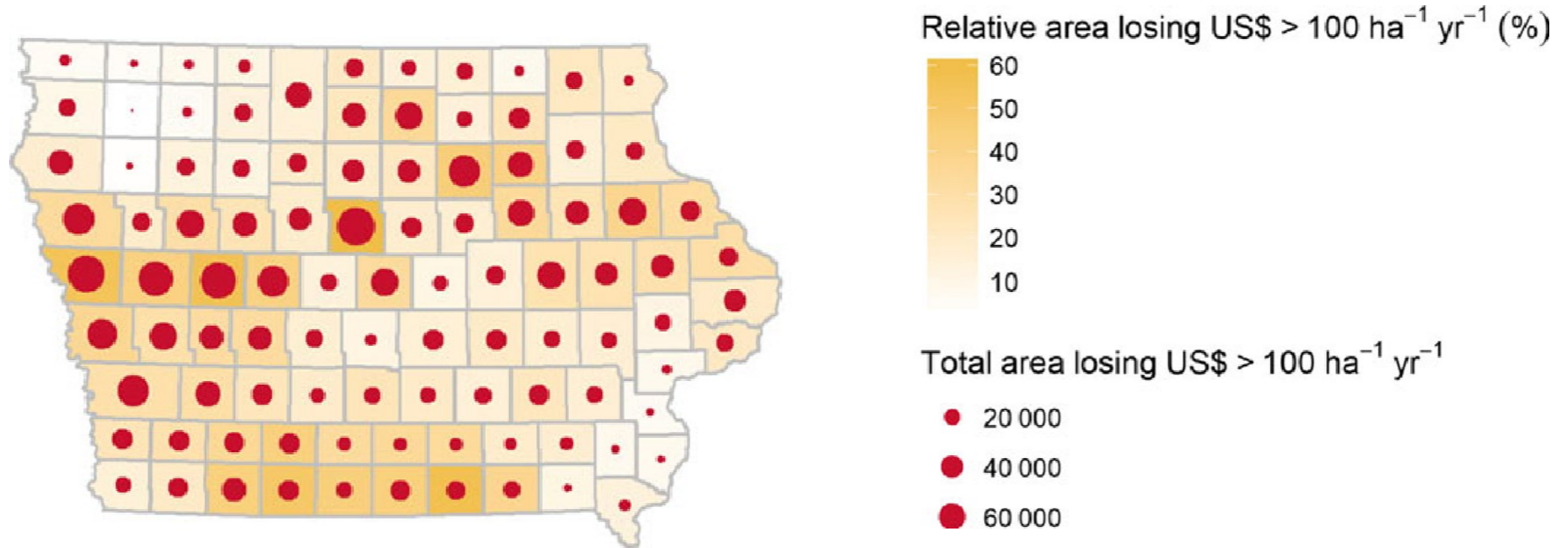
# Keeping what we have





# Profit-loss areas

12% of cropland acres annually lost  $\geq \$100/\text{ha}$



Brandes et al. (2018). Targeted subfield switchgrass integration could improve the farm economy, water quality, and bioenergy feedstock production. *GCB Bioenergy*, 10(3), 199-212.



# Riparian areas



Photo NRCS/SWCS photo by Lynn Betts





# Prairie strips



Photo NRCS/SWCS photo by Lynn Betts





# Wetlands





# Understanding research and education needs for increasing perennial vegetation



**Dan Loy**



**Adam Janke**



**Meghan Filbert**



**Lisa Schulte-Moore**



**Omar de Kok-Mercado**



**How does livestock production fit in to working landscapes?**

**How do we get there?**



# Breakout #1



## **How does livestock production fit in to working landscapes in 2071?**

- How is the perennial vegetation used?
- Who is using it and when?
- What species are using it? How? When?
- Who owns the land? The animals?
- What do you hear, see, and smell?
- What are the animals eating?

# Breakout #2



## How do we get there?

- For you and your neighbors, what would be the one change to make that would help move this vision forward?
- What needs to change within 2 years?
- What needs to change within 10 years?
- What are the incentives?





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**#PFI21**



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