Kitchen Tables and Tailgates

2019 Indiana CCA Conference

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reThink Soil

A Roadmap to U.S. Soil Health

SCIENCE AND RESEARCH

Overcome the science and research gap to support expansion of soil health management

1. Create cost-effective soil health measurement standards and tools
Create accurate, accessible, and standardized methods for rapid measurement of key soil health indicators at a scale that impacts management choices by farmers and landowners

LEAD ACTORS: Research institutions, private sector, Soil Health Institute, grower organizations

2. Develop operational management strategies for adaptively integrating soil health practices and systems
Build evidence and understanding among farmers regarding operational strategies locally tailored for integrating multiple soil health practices on a farm, including optimal cover crop programs

LEAD ACTORS: Research institutions, extension, conservation districts, NRCS, grower organizations, agricultural retailers, private sector

3. Advance the science of soil health benefits
Further quantify the economic costs, benefits and environmental impacts of different management practices on soil health, including organic systems, with consideration for different regions, soil types, and cropping systems

LEAD ACTORS: Research institutions, Soil Health Institute

ECONOMIC

Overcome economic obstacles by providing the market systems to secure soil health

4. Align incentives between landowners and farmers
Cultivate understanding among absentee landowners of soil health benefits for society and land value, encouraging new lease arrangements integrating soil health systems and practices

LEAD ACTORS: Landowners, farm management companies, lenders, etc.

5. Leverage technological innovation to overcome operational hurdles
Leverage technological innovations, such as sensors, drones, cover crop seeding equipment, precision agriculture software and hardware to advance adoption and continued implementation of soil health systems and practices

LEAD ACTORS: Public and private research institutions, agricultural retailers

6. Provide broader access to products and services supporting soil health
Develop new business models with agricultural retailers providing broader access to new products and services in order to accelerate the adoption of soil health systems and practices

LEAD ACTORS: Agricultural retailers

7. Create market signals in sustainability programs for soil health
Develop improved indicators rewarding soil health management outcomes in sustainability assessment programs, aligning the incentives of farmers and society

LEAD ACTORS: Field to Market, food companies, agribusinesses, leading sustainability programs and farmers

8. Reward farmers who optimize long-term soil health with lower crop insurance premiums
Advocate for federally subsidized crop insurance programs to value the benefits generated from improved soil health profiles through lower insurance premiums

LEAD ACTORS: Commodity organizations, agri-food sector, conservation organizations seeking to expand constituency, federal and state governments

POLICY

Improve the policy environment to advance soil health

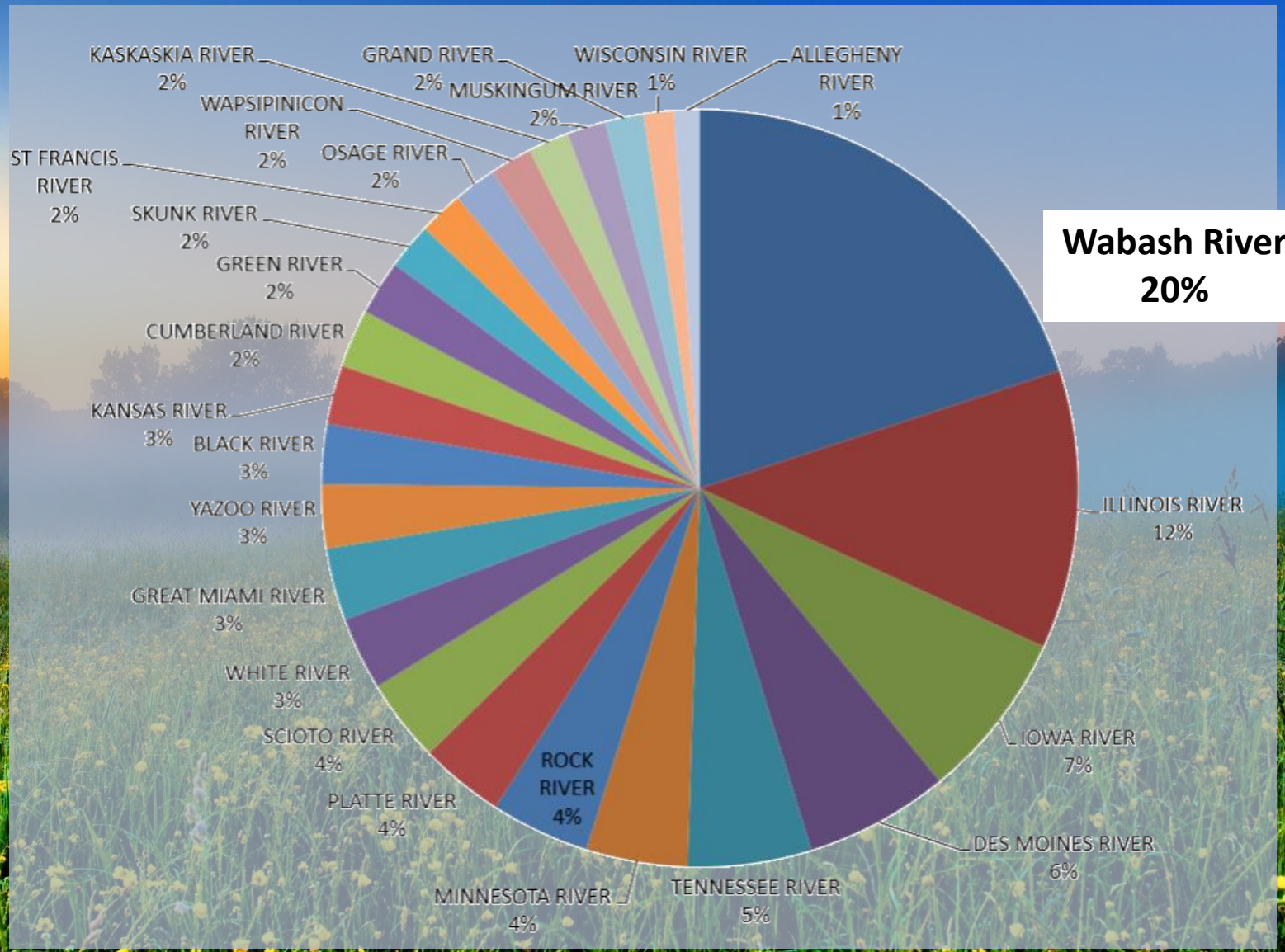
9. Support policies that enable greater investment in soil health
Support state and federal policy improvements focusing on reducing barriers to soil health practice adoption, targeting priority areas for implementation, and comprehensively assess impacts for societal value

LEAD ACTORS: State and federal governments, conservation organizations seeking to expand constituency

10. Build a more diverse constituency for soil health policy
Build a strong and diverse network of supporters for soil health policy, including farmers, landowners, the agri-food sector, community leaders, and societal interest groups

LEAD ACTORS: Farmers, landowners, agri-food sector, community leaders, societal interest groups

The Nature Conservancy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OSAGE RIVER 2%
ST FRANCIS RIVER 2%
SKUNK RIVER 2%
GREEN RIVER 2%
CUMBERLAND RIVER 2%
KANSAS RIVER 3%
BLACK RIVER 3%
YAZOO RIVER 3%
GREAT MIAMI RIVER 3%
WHITE RIVER 3%
SCIOTO RIVER 4%
PLATTE RIVER 4%
ROCK RIVER 4%
MINNESOTA RIVER 4%
TENNESSEE RIVER 5%
DES MOINES RIVER 6%
IOWA RIVER 7%
ILLINOIS RIVER 12%
Wabash River 20%

MARKET SUPPLY CHAIN OPPORTUNITIES

Government

landowners

Carbon

Farmer

Banks

Crop Advisors

Risk Managers

Elevators

Grain Dealers

Food Processing /Product Industry

Food Retail

Photosynthesis

Farmer Managers

Investors

Fertilizer Dealers

Seed Cos + Dealers

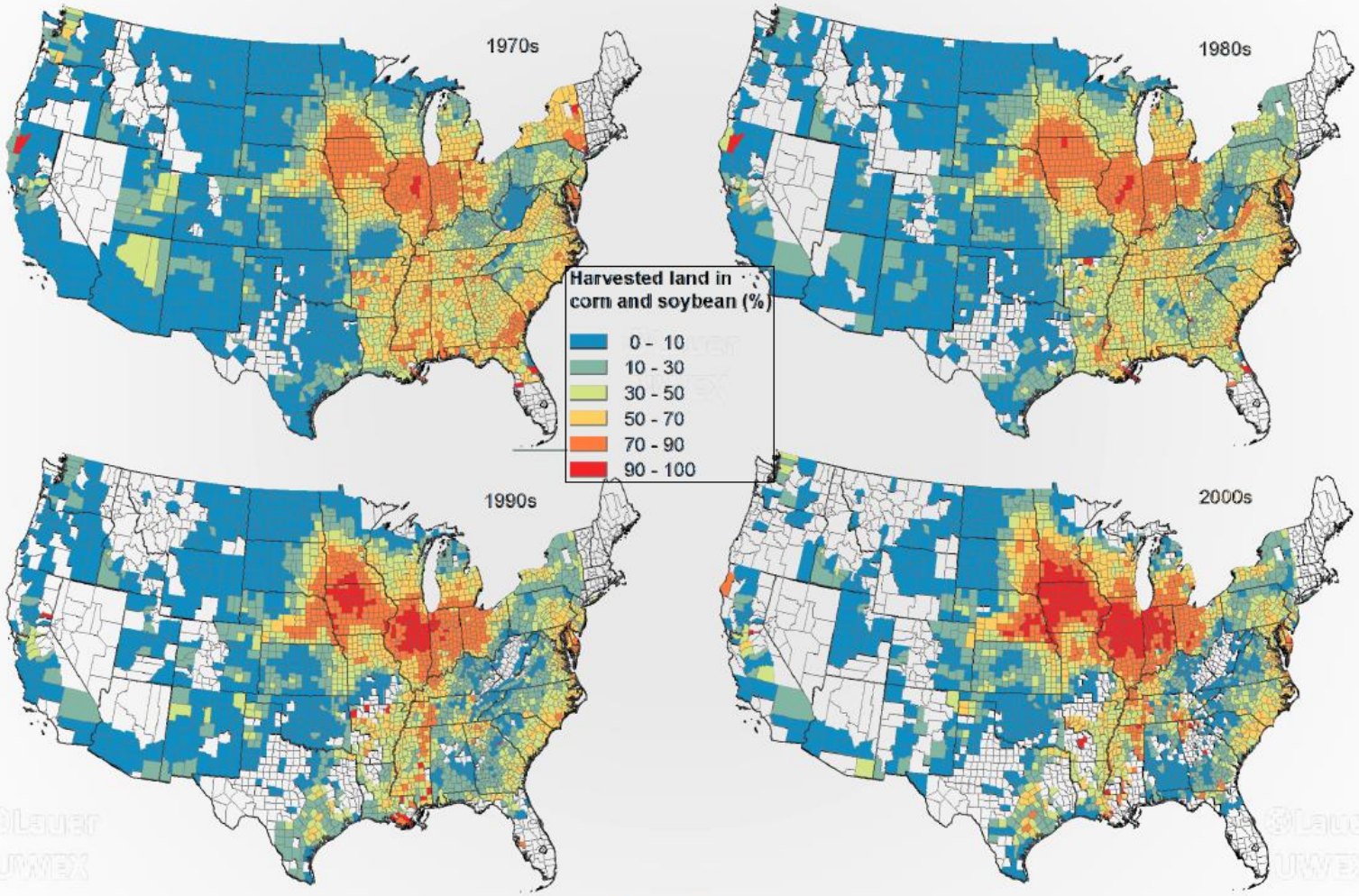
Ag Assocs

Conservation Orgs

Meat Industry

Ethanol

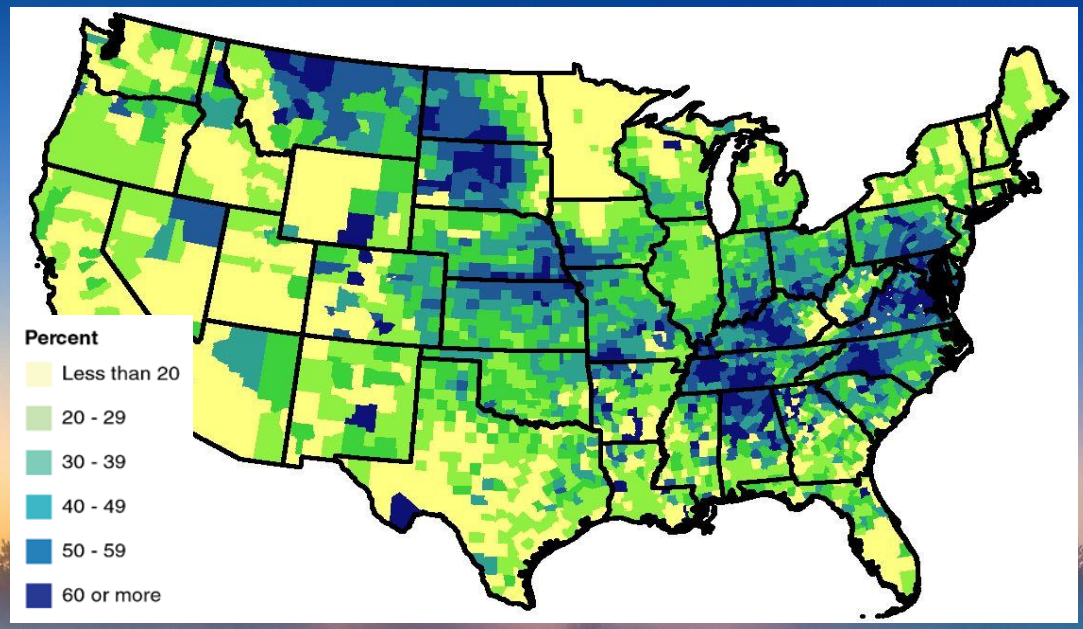
Percent of Harvested Field Crop and Vegetable Land in Corn and Soybean

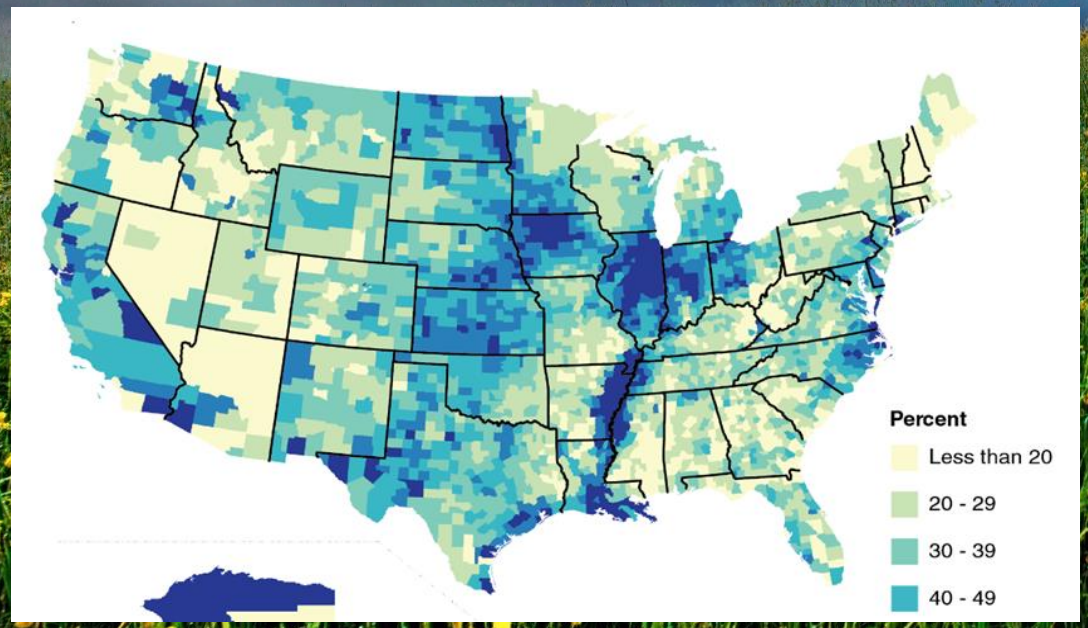


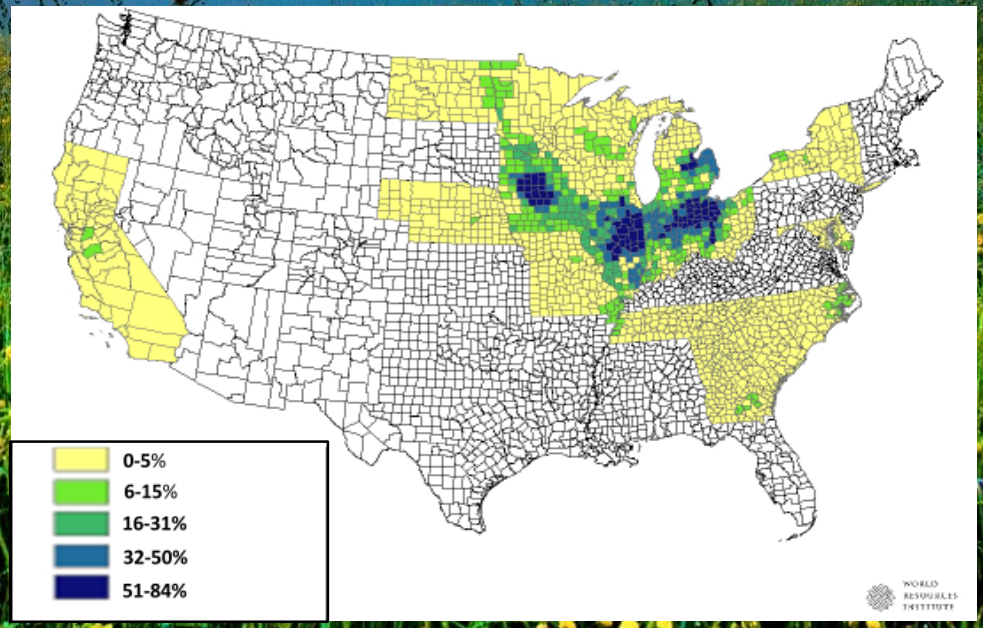
UW Extension
University of Wisconsin-Extension

http://corn.agronomy.wisc.edu

Lauer, 2015 (Data source: USDA-NASS)


Percent
Less than 20
20 - 29
30 - 39
40 - 49
50 - 59
60 or more

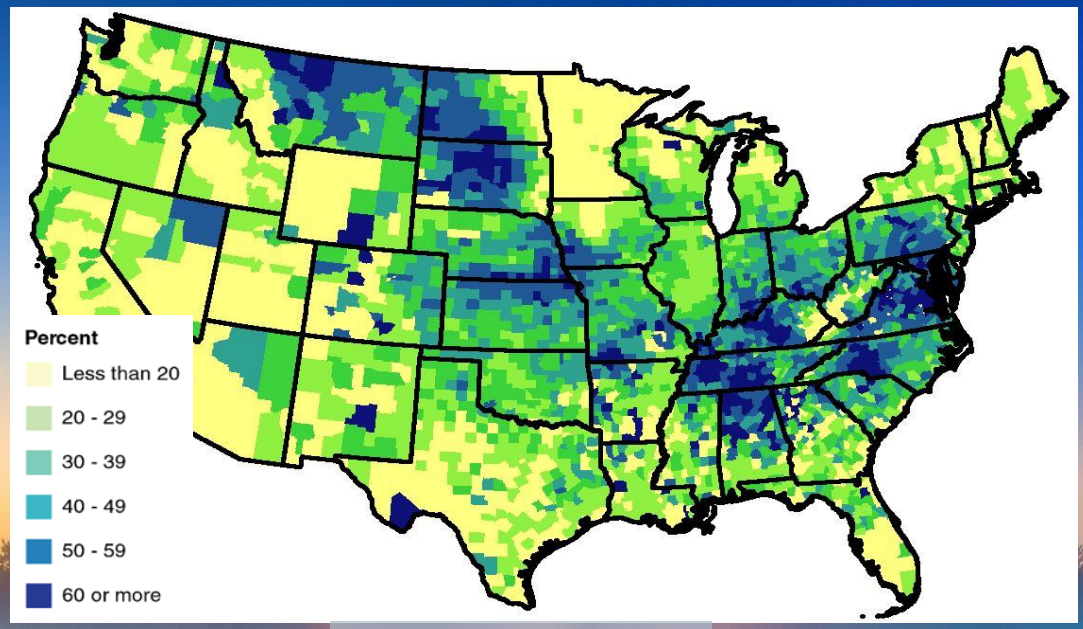

Percent
Less than 20
20 - 29
30 - 39
40 - 49


0-5%
6-15%
16-31%
32-50%
51-84%

A Case for Soil Health

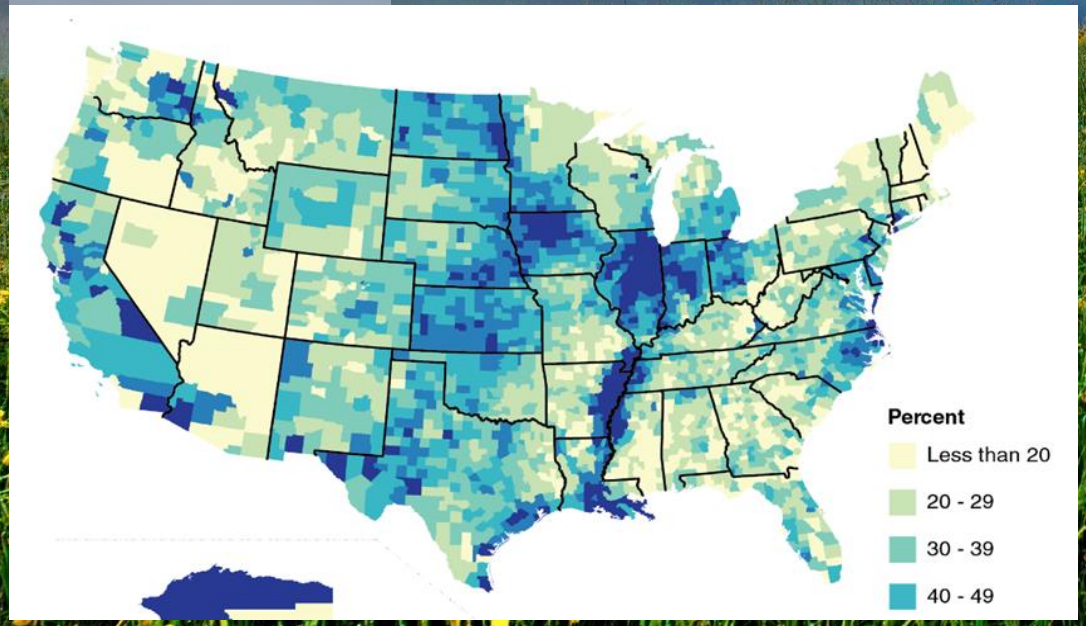
- Improved crop yields
- More resilient crop yields
- Improve water infiltration and storage
- Higher soil carbon and SOM
- Increased soil biological activity
- Faster nutrient cycling with larger pool of available nutrients
- Less compaction, crusting and erosion
- Better soil aggregate stability
- Better weed control
- Reduced erosion and soil loss
- Nutrient use efficiency and retention
- Farm resilience with weather variability
- Improved water utilization and management

The Nature Conservancy

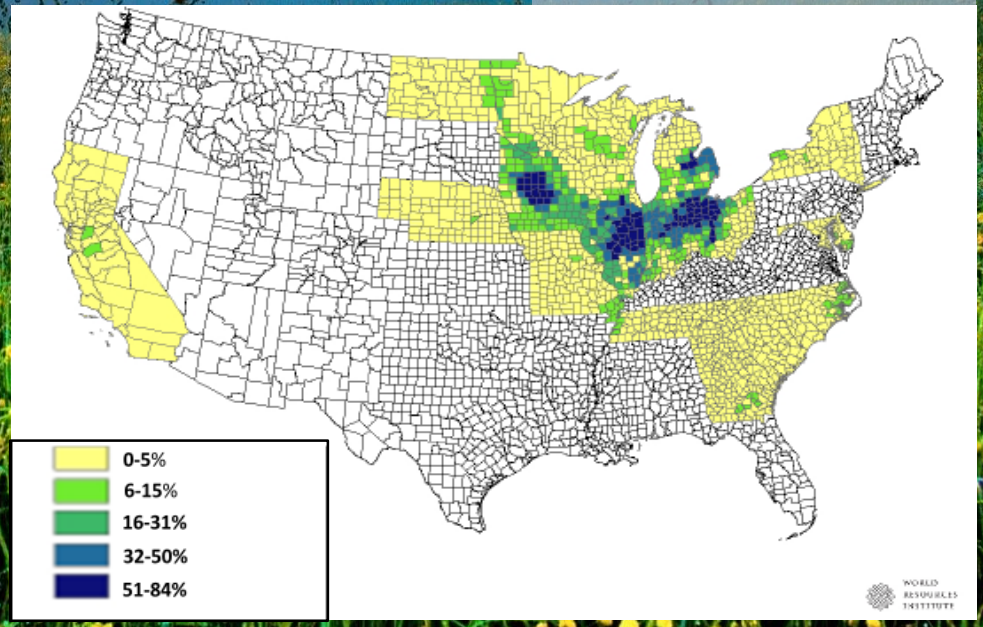


% No-Till

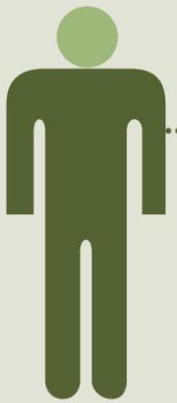
% Rented



% Tile Drained

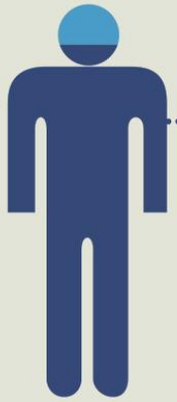


Landowner-Farmer Relationship



80%

of NOLs indicated that their farmer is an important source for conservation information



84%

of NOLs indicated that maintaining soil productivity is a very important quality for a farm operator

87%

of NOLs indicate that they are committed to their farmer continuing to farm their land

16years the average number of years that NOLs and farmers have been working together.

Source: Survey of Iowa landowners by American Farmland Trust and Utah State University

CONVERSATIONAL
Forks in the Road

- Are you telling?

  Or asking?

- Is this about me?

  Or about the farmer?

- Are you interesting?

  Or interested?

- What producers in my area are the best prospects for this conversation?
- List the characteristics of your best prospects for this conversation?
- Why would a producer want to have this conservation conversation with a trusted agronomist?
- What's in it for the producer?
- What's in it for you, the agronomist?

- This is a different kind of call ~ highlight the differences
- Who should participate?
- Where should the conversation take place?
- Make appointments
- Have conversations
- Report responses
- Become skillful in the “Conservation Conversation”
- Asking great questions, listening attentively, potentially assisting in implementation direction

CRAFT THE **BEST POSSIBLE QUESTIONS**

Positioned Detective Questions

Relational questions (earns the right to go to other questions)

- Minimizing or stop erosion?
- Improve nutrient management?
- Connecting with non-farm public and consumers?
- Improving soil health?
- Leaving a legacy?

CRAFT THE **BEST POSSIBLE QUESTIONS**

Positioned Detective Questions

- What practices do you think will help keep your land productive and in the best shape possible over the long term and for future generations?
- What practices do you think could improve productivity of your land in both good years and bad?
- What farming practices do you think can have the biggest impact on improving soil health and water quality in your operation?

Helpful Resources

Government/Academic:

- USDA-NRCS
- County soil and water conservation district office
- State Department of Ag
- State university extension
- Midwest cover crop collaborative
- American Society of Agronomy and CCA online classroom
- www.nutrientstewardship.com
- 4RPlus.org
- SPARC online courses

Agriculture Sector:

- Ag retailers and crop advisers
- Land contractors and engineers
- Farm and commodity groups
- Friends, neighbors, other farmers

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