Soil Health-
Soil Management

precision™ ADVANTAGE
MFA INCORPORATED

MFA TRAINING CAMP
WHERE EXCELLENCE IS ACHIEVED

MFA Crop-TRAK™

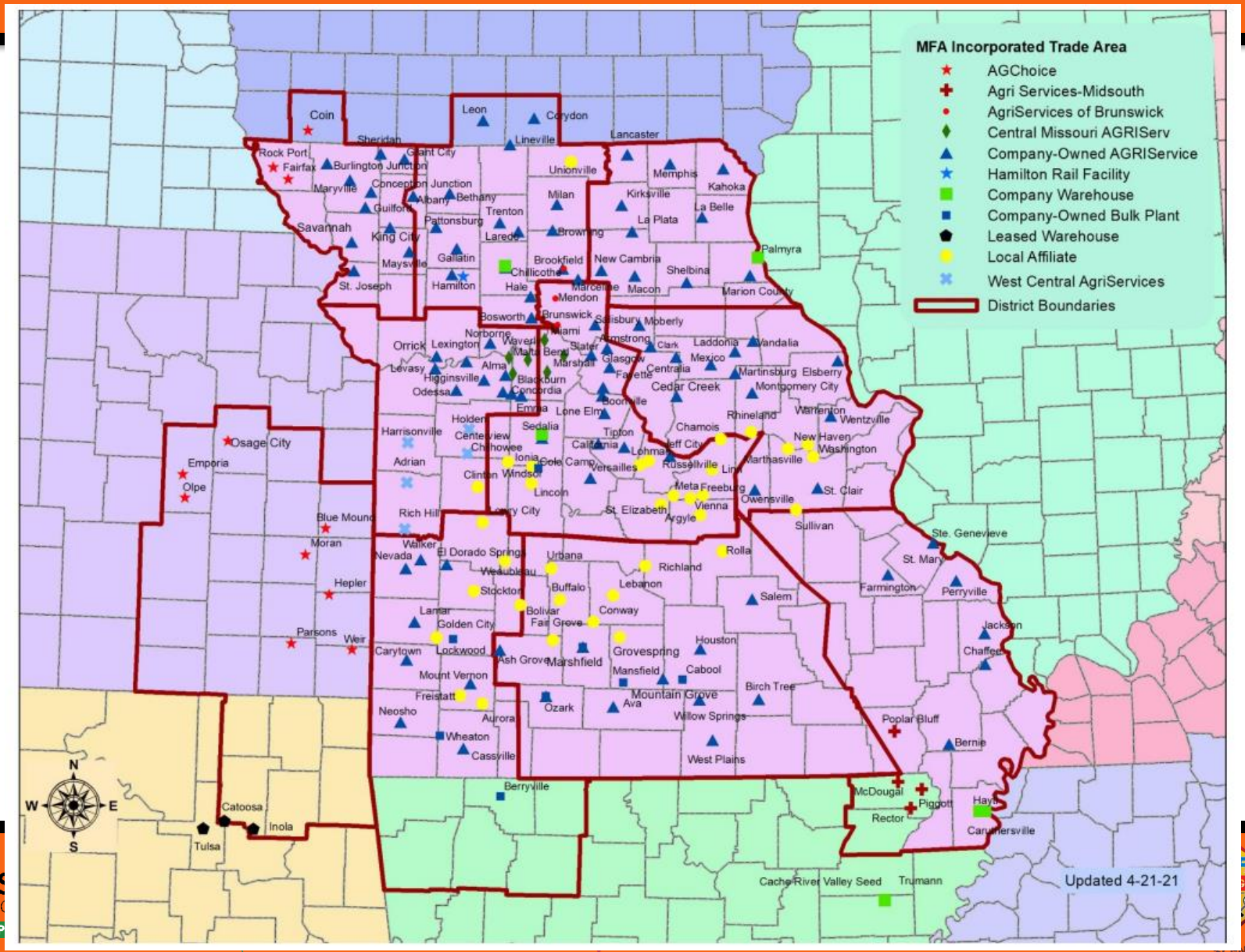
NUTRI-TRACK

mfa

MFA Inc.

- Agri-service cooperative
  - ~30,000 member owners
  - 129 retail locations
  - Agronomists, crop consultants, precision equipment, plant foods, seed division, crop insurance, feed, animal health, crop protection

MFA Inc.


MFA Incorporated Trade Area
AGChoice
Agri Services-Midsouth
AgriServices of Brunswick
Central Missouri AGRIServ
Company-Owned AGRIService
Hamilton Rail Facility
Company Warehouse
Company-Owned Bulk Plant
Leased Warehouse
Local Affiliate
West Central AgriServices
District Boundaries
Updated 4-21-21

Farm Ownership

- [redacted] of U.S. farmland now owned by someone other than the farmer
  - Higher in some areas- 60-80% in parts of IA, IL
  - Families, Trusts, Retirees, Investors/Recreation
- Communication is key

Why does it matter, and what has led us here?

Mollisol

soil type

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BY The Editors of Encyclopaedia Britannica | View Edit History

Mollisol, one of the 12 soil orders in the U.S. Soil Taxonomy. Mollisols are characterized by a significant accumulation of humus in the surface horizon, or uppermost layer, which is almost always formed under native grass vegetation. They are highly arable soils used principally for growing grain and cereal crops, often inspiring the name “breadbasket” for the regions where they dominate. Covering approximately 6 percent of the nonpolar continental land area on Earth, they are found primarily in subhumid to semiarid grasslands in Europe, Asia, the Argentine Pampa, the Great Plains of North America, and the Palouse region of the northwestern United States.

FAST FACTS
Facts & Related Content

Mollisol soil profile

See all media

Related Topics: soil

See all facts and data →

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We have messed this up before…

Mesopotamia

- 2300 BC
- Fertile Crescent
- Built around the fertile soils between the Tigris and Euphrates
- "Land Between Rivers"
- Irrigated Agriculture
- Destroyed by Salts

Source: https://bftaxhelp.wordpress.com/about-property-taxes/history-of-property-taxes/ancient-mesopotamia/

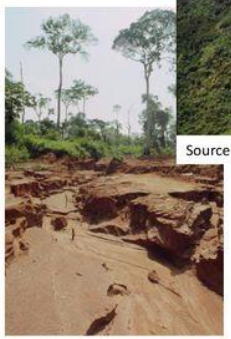
Soil Science Society of America

2015 International Year of Soils

Mayan

- 500 BC
- Deforested for cities and crops
  - Initial high soil fertility
  - Rapid decrease in productivity due to poor soil fertility
- Mayan Collapse
  - Soil Erosion
  - Land Degradation

Source: http://www.fao.org/docrep/011/i0440f/i0440f02.htm



Source: www.worldwildlife.org

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2015 International Year of Soils

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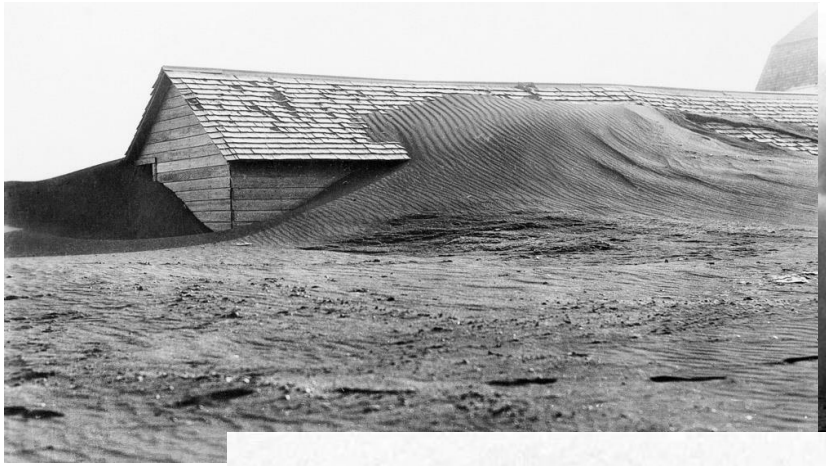
Soil management through time

Soil management through time



We thought we had it….

Building a Soil Health System

- Structural practices + Soil Health Principles

Overview- Why a Soil Health System

- Protecting soil from rain or runoff

Resiliency

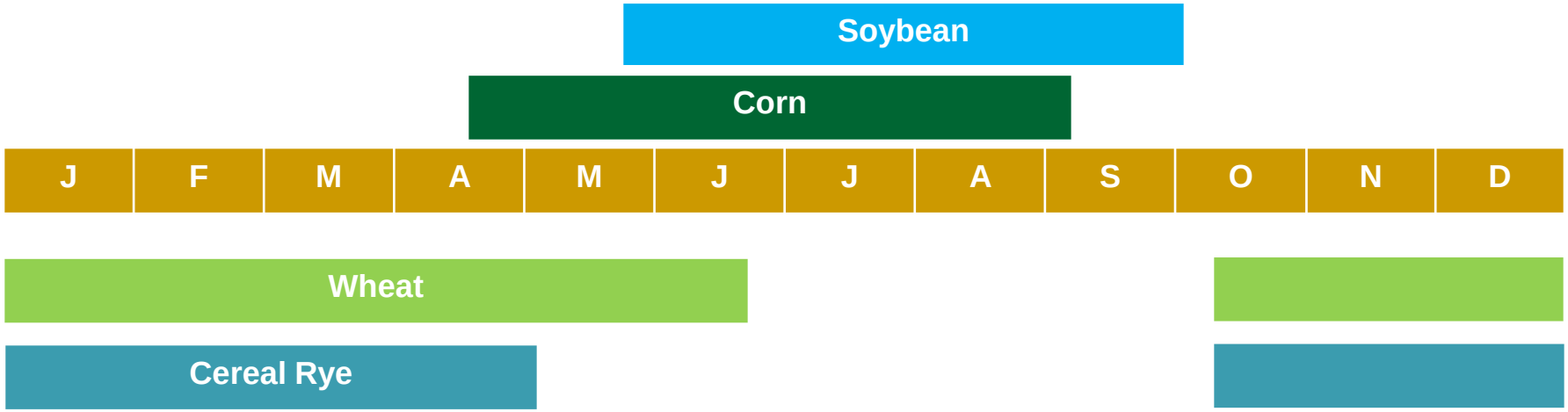
Key Points- Soil Health

- Residue
  - Cover the soil
- Living Root
  - As many days as possible
- Minimize Disturbance
- Diversity
  - Species (covers & cash crop)

Residue

- Crop rotation
- Cover crop residue

Living Root

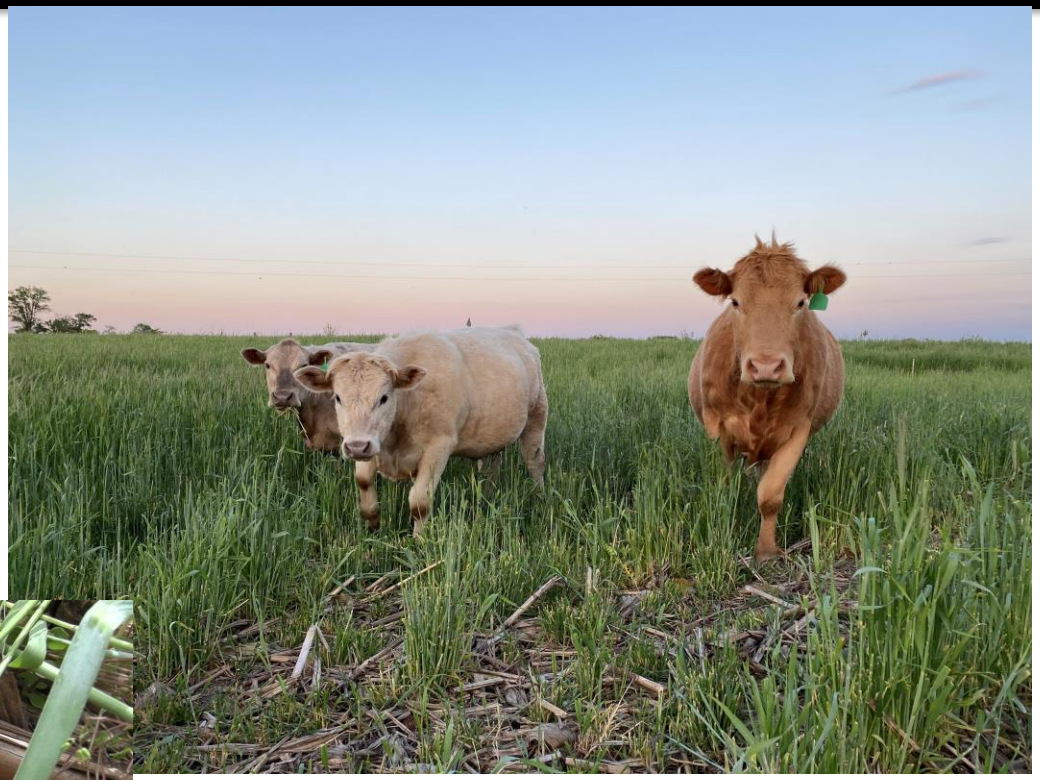


Disturbance

- Soil Disturbance
  - Tillage
    - Not necessarily never till…
  - Fallow periods
- Soil Biology

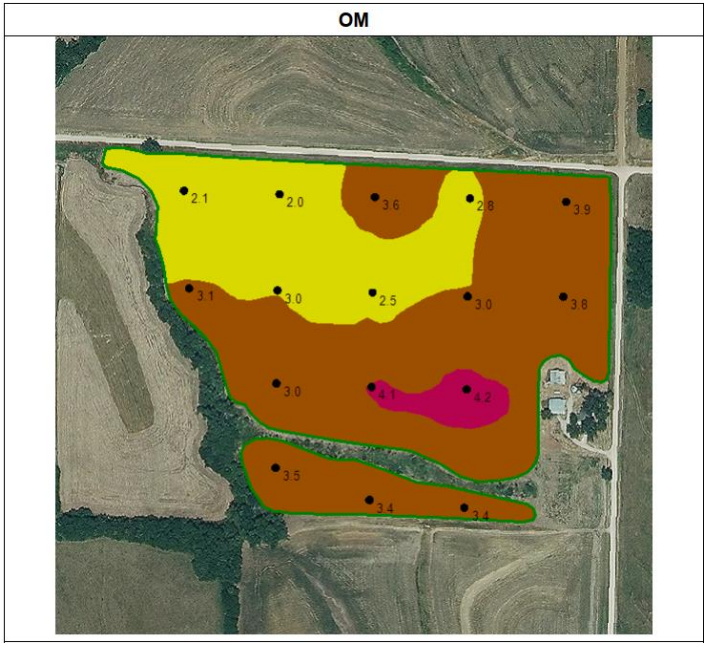
Diversity

- Crop Rotation
- Cover Crops
- Livestock



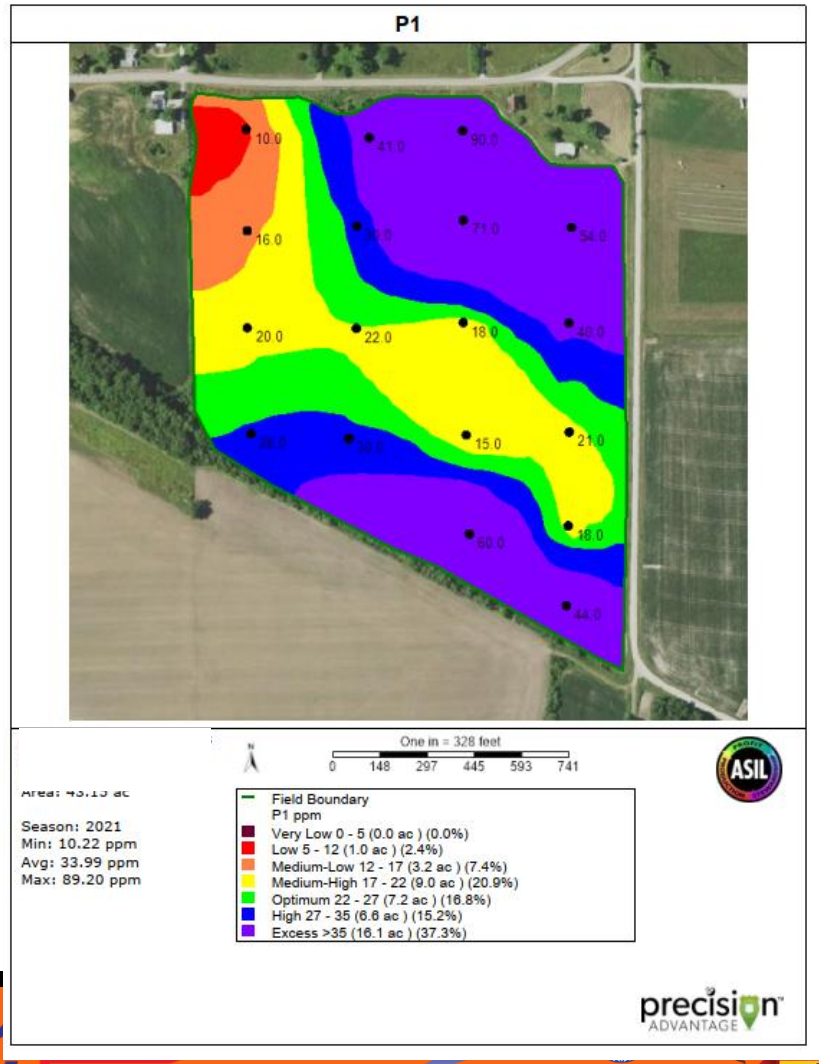
The Basics

- **Multiple Variables**
  - **Soil Type- Can't change**
    - **Wide array of effects**
      - **Water/Nutrient holding capacity, erodibility**
  - **Soil Organic Matter (OM)- Structure**
    - **Amount of organic material in the soil**
    - **Water holding capacity, resiliency**
    - **Infiltration, Plant available Nutrients**
  - **Soil Nutrient Levels**
  - **Testing for Soil Health?**

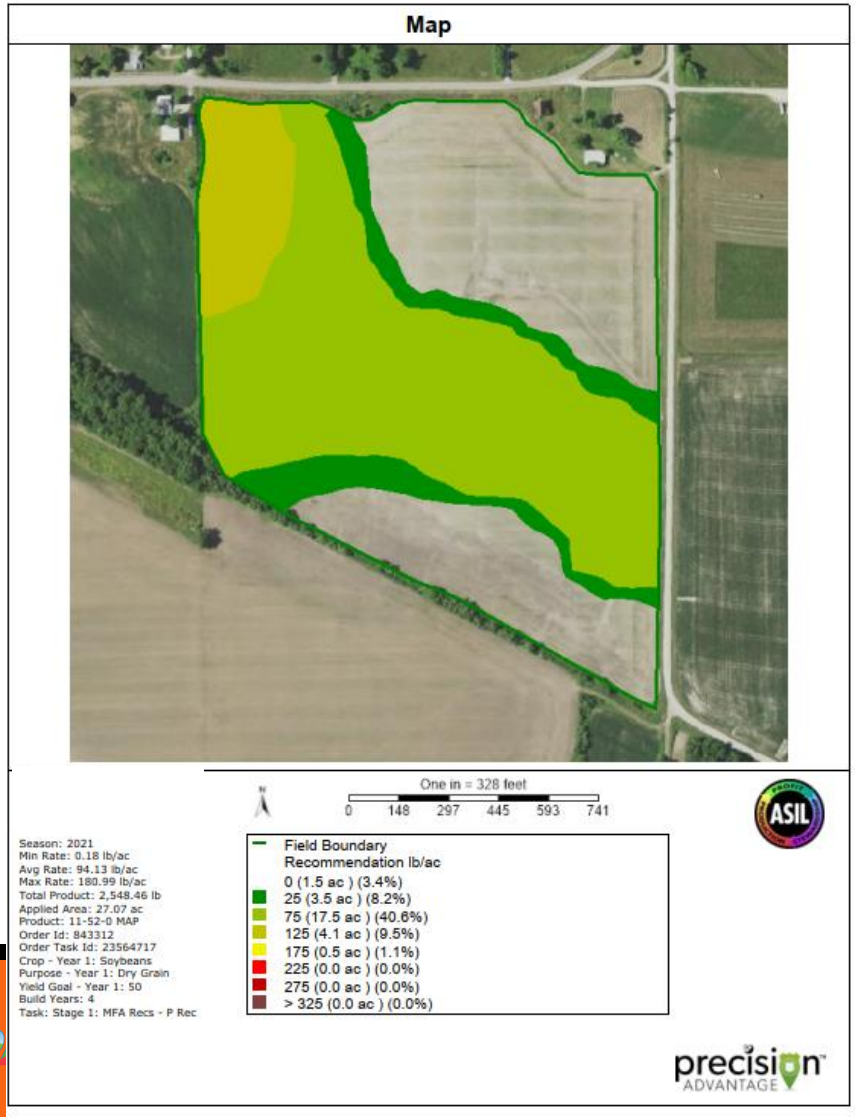


Long Term Inputs

- Phosphorus
  - Bound to soil
    - Extremely Immobile

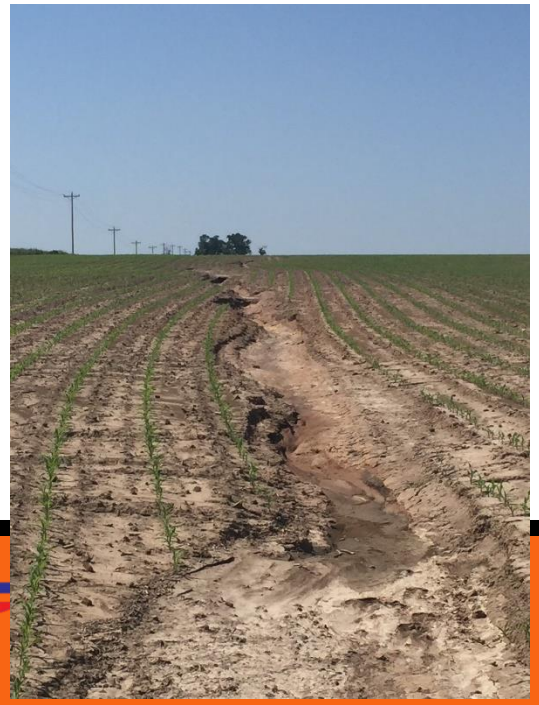


Data = Accuracy



Rented Land

- **Without long term positive relationships/commitments**
  - **Less likely to invest in fertility**
  - **Less likely to invest in conservation practices**
  - **More likely to make decisions that impact only the short term**



Rented Land

- **Dominance of agreements are annual verbal commitments**
  - **Most are cash rent or moving that direction**
- **Stewardship, fertility, soil health are long term investments**

Carbon Markets-NRCS-SWCD

- Have conversations about markets/cost share
  - Support each other, whomever is participating

How can you better partner with a grower/landowner?

- Share long term investments such as lime, P & K build
- Work together to maintain infrastructure (terraces, waterways), look at field margins
  - Make sure everything still makes sense
- Help build a soil health system on your farm
  - Risk mitigation
- Stay in communication with your grower, work as a team to address issues on the farm
  - The better the partnership, the better your farm/business gets treated
  - Be up front

Questions?

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