

# Practical Implementation of Cover Crops

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# Outline

- Sales
- Create awareness of need
- Understand the customer
- Customize solutions
- Help measure success/failure
  - Educated guess

# What is a healthy soil?

“...continued capacity of the soil to function as a vital living ecosystem that sustains plants, animals and humans.” –NRCS

- How do you manage for this?

# Earth Day 2015





# May 2017



# “Snirt”



# Native vs farmed



# Notill Soybean Ground





# Salinity







# Waterhemp



Kochia







# Kochia 14 days after dicamba

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# Waterhemp 14 days after dicamba

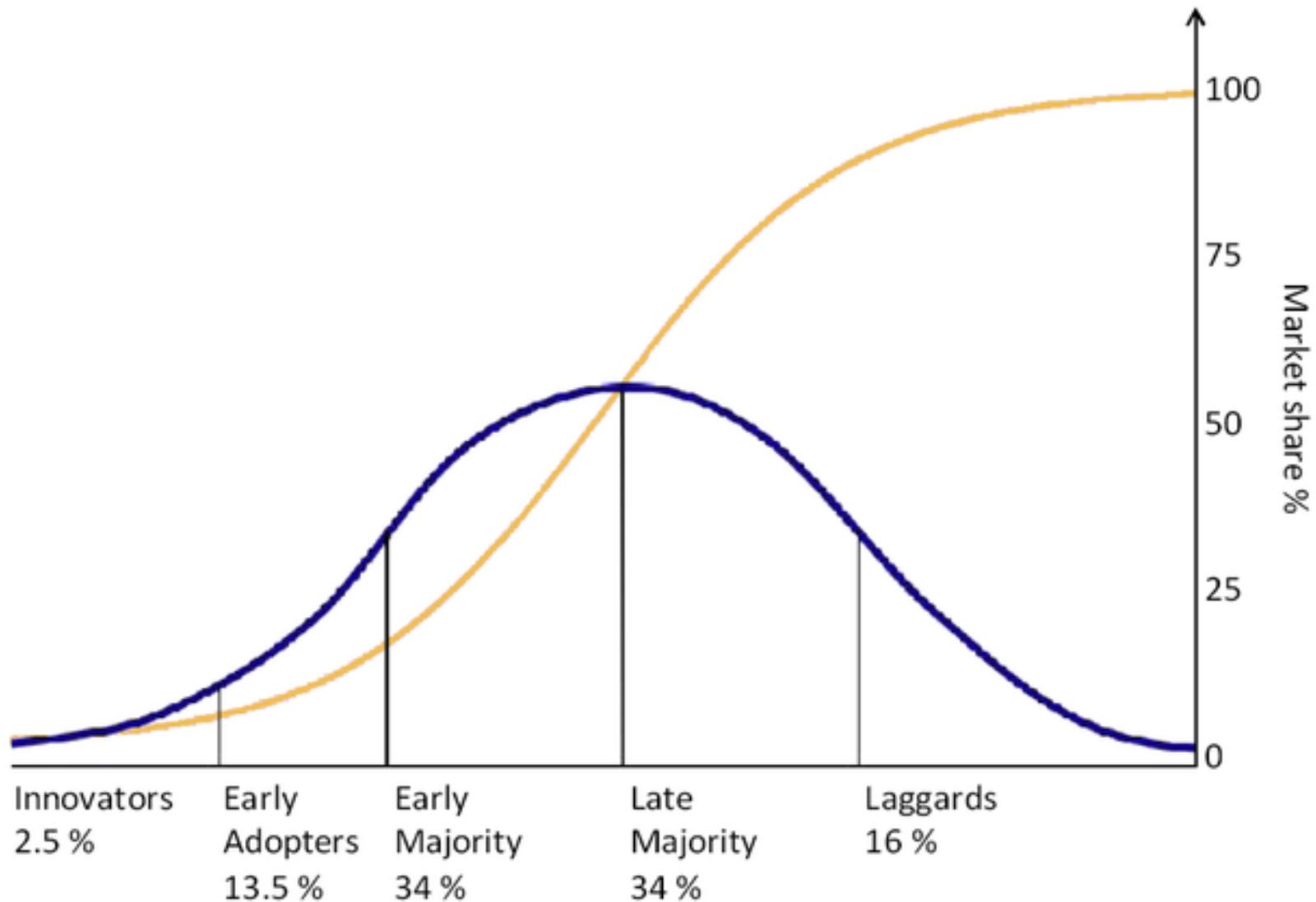
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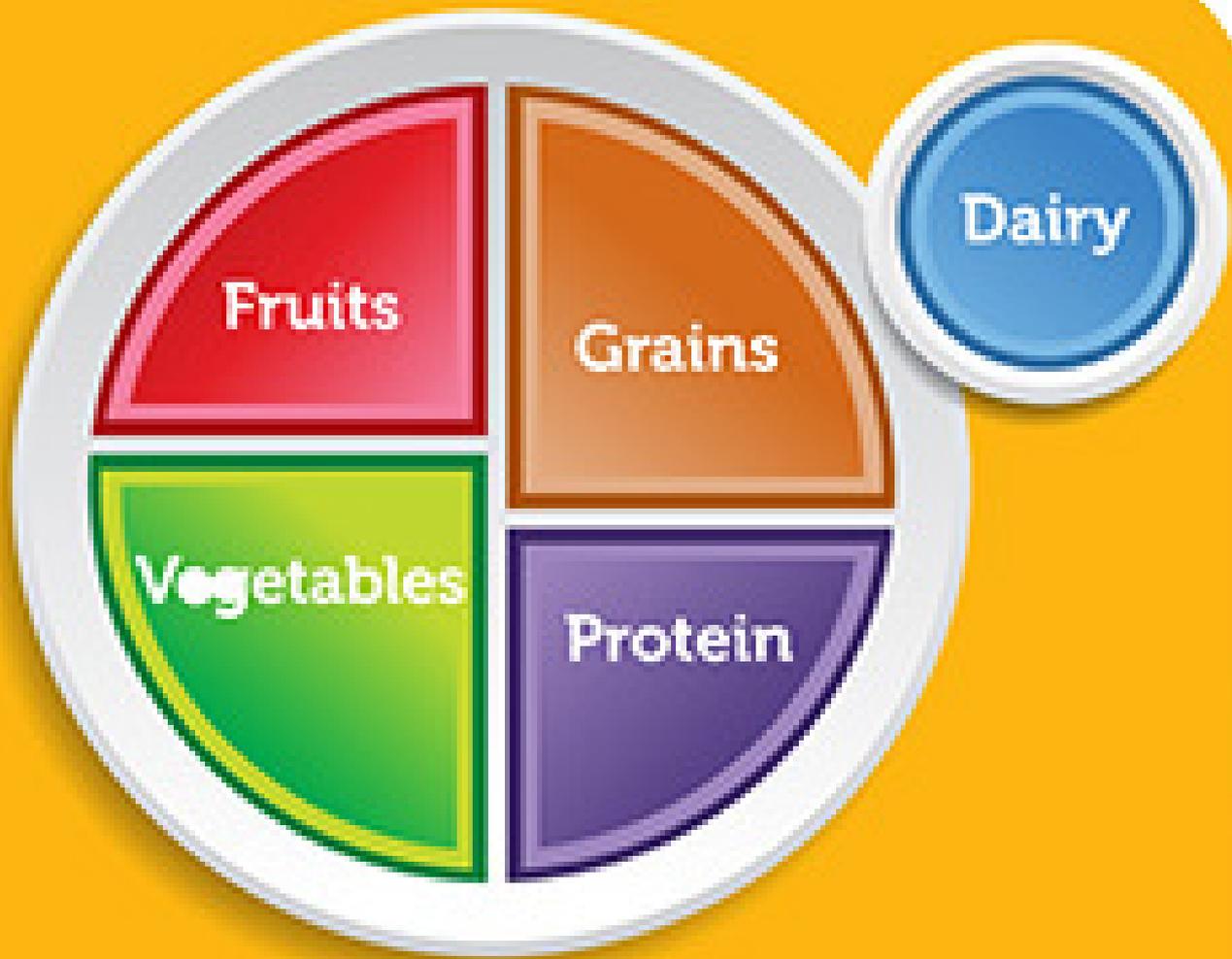
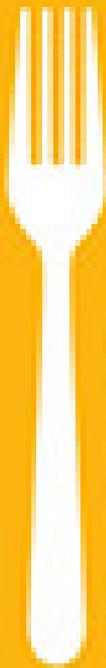


# People in this room get Frustrated

- Do producers see?
- Do they care?
- “Stubborn farmers”
- “They just don’t listen”
- % of Cover crop / soil health adoption?

# Culture/Stages of Adoption





Choose **MyPlate**.gov

Bananas  
89¢/lb





# My Grocery Store

Food type	Feet of aisle	% of Total	
<b>Fresh Veg/Fruit</b>	<b>15</b>	<b>2.22%</b>	<b>3.56%</b>
<b>Canned Veg/Fruit</b>	<b>4</b>	<b>0.59%</b>	
<b>Frozen Veg/Fruit</b>	<b>5</b>	<b>0.74%</b>	
<b>Dairy</b>	<b>30</b>	<b>4.44%</b>	<b>7.41%</b>
<b>Frozen dairy</b>	<b>20</b>	<b>2.96%</b>	
<b>Meat</b>	<b>42</b>	<b>6.22%</b>	<b>6.22%</b>
<b>Chips</b>	<b>20</b>	<b>2.96%</b>	<b>2.96%</b>
<b>Total</b>	<b>675</b>	<b>20.15%</b>	

# My recommendations

- **Fresh self assessment**
  - Neighbor
  - Set goals
- **SCIENCE, SCIENCE, SCIENCE!**
- **Watch out for “experts”**
- **“A” Student doesn’t need tutor**
- **Results take time**

# My Goals

- **Erosion**
    - Wind and water
  - **Water**
    - Too much and not enough
  - **Salinity**
  - **Weeds**
- 
- A photograph of a large agricultural field with rows of green crops, likely soybeans, stretching towards a body of water under a cloudy sky. The field is the central focus, with rows of plants receding into the distance. In the background, there is a calm body of water, possibly a lake or a wide river, and a line of trees on the far shore. The sky is bright with scattered white clouds. The overall scene is a typical rural landscape.

# Some Things We are Doing

- Reduced till
- Split fields
- Adding covers
- Use right species
  - Covers and crop
- Carefully adjusting inputs
  - Weed control
  - Fertilizer









**CENTROL**  
AG CONSULTING







# Cereal Rye



# Cereal Rye



# “Planting Green”







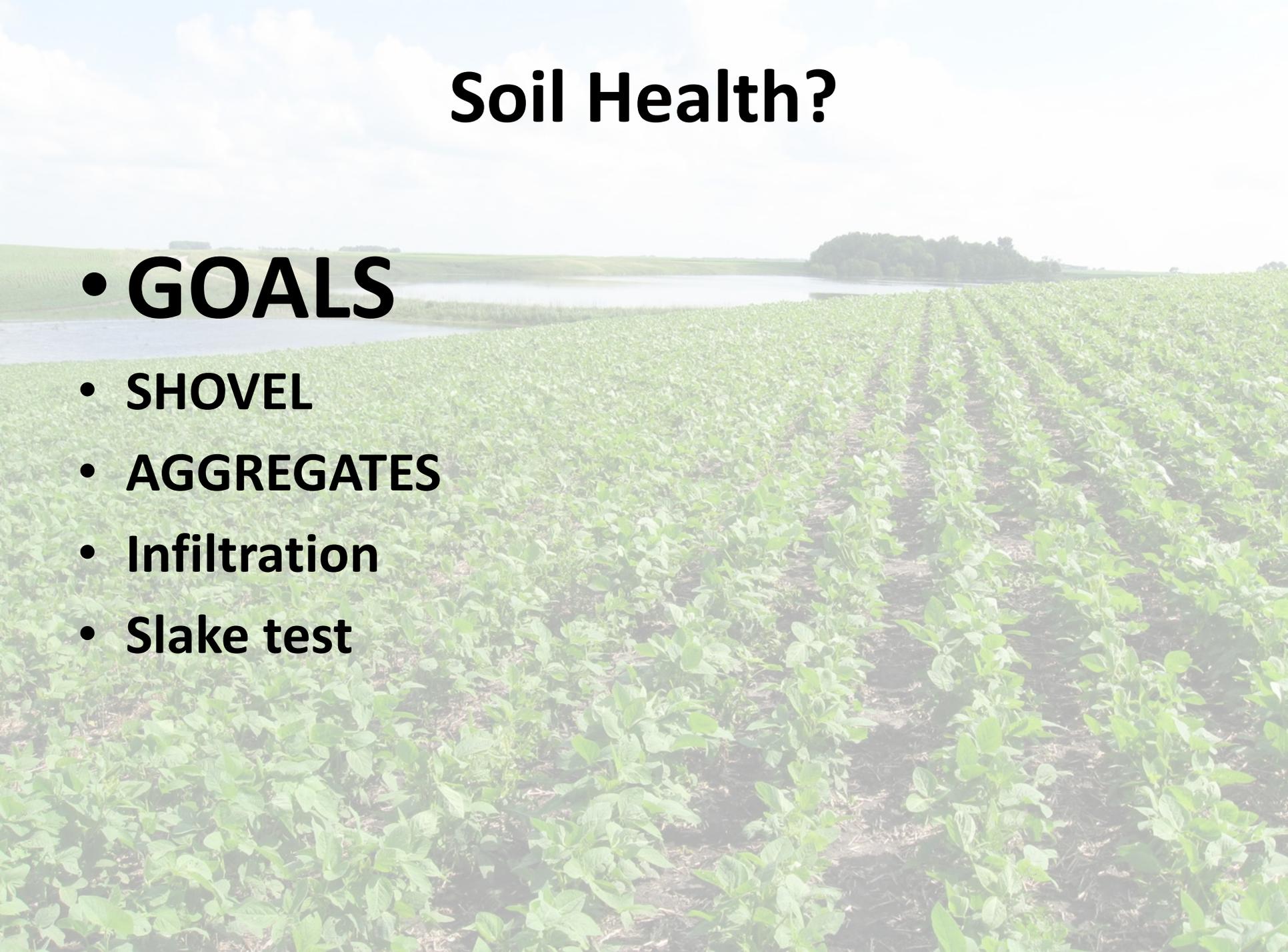






# Soil Health?

- **GOALS**
- **SHOVEL**
- **AGGREGATES**
- **Infiltration**
- **Slake test**













USDA Natural Resources Conservation Service

# Soil Structure Slake Test

## Conventional Tillage

## No-Till System

### Soil Aggregate Stability

unlock the  
**SECRETS**  
of the  
**SOIL**







# Weed Control Tools

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1. Herbicides
2. Tillage
3. Crop Rotation
4. Canopy
5. Cover Crops
6. Mowing
7. Handweeding
8. Allelopathy
9. Harvest Weed Seeds
10. Nitrogen Management
11. Grazing
12. Exclusion (Living fence)
13. Mulch
14. Weed Seed Predation
15. Flame Cultivator
16. Electricity
17. UV Light
18. Rotary Cultivator
19. Steam
20. Liquid Nitrogen
21. Robots with lasers
22. Abrasive blasting (sand?)