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?
May 2017
“Snirt”
Native vs farmed
Notill Soybean Ground
Salinity
Kochia
Kochia 14 days after dicamba
Waterhemp 14 days after dicamba
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

Rogers 1962

- Innovators: 2.5%
- Early Adopters: 13.5%
- Early Majority: 34%
- Late Majority: 34%
- Laggards: 16%
## My Grocery Store

<table>
<thead>
<tr>
<th>Food type</th>
<th>Feet of aisle</th>
<th>% of Total</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Veg/Fruit</td>
<td>15</td>
<td>2.22%</td>
<td>3.56%</td>
</tr>
<tr>
<td>Canned Veg/Fruit</td>
<td>4</td>
<td>0.59%</td>
<td></td>
</tr>
<tr>
<td>Frozen Veg/Fruit</td>
<td>5</td>
<td>0.74%</td>
<td></td>
</tr>
<tr>
<td>Dairy</td>
<td>30</td>
<td>4.44%</td>
<td>7.41%</td>
</tr>
<tr>
<td>Frozen dairy</td>
<td>20</td>
<td>2.96%</td>
<td></td>
</tr>
<tr>
<td>Meat</td>
<td>42</td>
<td>6.22%</td>
<td>6.22%</td>
</tr>
<tr>
<td>Chips</td>
<td>20</td>
<td>2.96%</td>
<td>2.96%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>675</strong></td>
<td><strong>20.15%</strong></td>
<td></td>
</tr>
</tbody>
</table>
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
Some Things We are Doing

- Reduced till
- Split fields
- Adding covers
- Use right species
  - Covers and crop
- Carefully adjusting inputs
  - Weed control
  - Fertilizer
Cereal Rye
Cereal Rye
“Planting Green”
Soil Health?

• GOALS
  • SHOVEL
  • AGGREGATES
• Infiltration
• Slake test
Discussion
Weed Control Tools

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?)