Development of Dodge County Farmers for Healthy Soils and Healthy Waters

John Bohonek – County Conservationist
Robert Bird – Conservation Agronomist
History of the Group

- Started as the Non-Point Source Workgroup.

- 1st Meeting in 2015
  - Farmers
  - Lake Representatives
  - LCD
  - DNR
  - NRCS
  - US Fish & Wildlife
  - UW-Extension
Finding Common Ground

Lake Districts
• Improve Water Quality

Local Producers
• Improve Soil Productivity

Soil Health

Ways to Attain this Common Goal
• Conservation Practices
  • Cover Crops
  • No-Till/Strip Till
  • Manure and Nutrient Management
• Reducing:
  • Erosion
  • Phosphorus Runoff from Farm Fields to Surface Waters
Mission Statement

“Improving our Community’s Soil and Water through Conservation Practices and Education”

Website: www.DodgeCountyFarmers.com
Facebook: Dodge County Farmers Healthy Soil & Water

Tony Peirick – Chairman
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Email: tspeirick@hughes.net
Dodge County Farmers for Healthy Soils-Healthy Waters

& Dodge County Alliance for Healthy Soils-Healthy Waters
1st Annual Soil Health Workshop
Feb 8-9 2017 (Day 1)

Farmer Panelists
Panel #1—Cover Crops:
Tony Peirick  Watertown
Dale Macheel  Randolph
Steve Smits/Damon Reabe  Waupun

Panel #2—No-Till/Strip Till:
Ricky Kratz  Slinger
Jonathan Gibbs  Fox Lake
Ryan Nell  Beaver Dam

Panel #3—Manure/Nutrient Management:
John Koepke  Oconomowoc
Kevin Roche  Columbus
Jordan Crave  Waterloo

Ray Archuleta, Soil Health Expert
4 Principles of Soil Health

1. Provide Continuous Living Roots
2. Minimize Disturbance
3. Maximize Biodiversity
4. Maximize Soil Cover

Image by CCSI, 2014

Soil Builders Soil Protectors
<table>
<thead>
<tr>
<th>Mental</th>
<th>Educational</th>
<th>Equipment/Labor</th>
<th>Cost/Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have always done it this way—not changing</td>
<td>Herbicide program would have to be changed</td>
<td>I don’t have the equipment to seed cover crops</td>
<td>I only have a short term lease on rented land</td>
</tr>
<tr>
<td>We are too far north for cover crops</td>
<td>my fertilizer dealer/agronomist doesn’t recommend</td>
<td>shortage of labor to plant cover crops</td>
<td>I mess with my crop insurance</td>
</tr>
<tr>
<td>Don’t want to experiment—not proven</td>
<td>I can’t convince my business partner</td>
<td>planned to cover crop but didn’t get it done</td>
<td>I only have a couple years until retirement—then I will rent land</td>
</tr>
<tr>
<td>Landlords don’t see value in cover crops</td>
<td>my end goal is top yields—covers are a risk</td>
<td>no-till equipment too expensive to wear out planting covers</td>
<td>seed too expensive—can’t get when I need it</td>
</tr>
<tr>
<td>cost share programs too complex</td>
<td>lack of local knowledge—proven methods</td>
<td>too many acres to cross currently without another pass planting covers</td>
<td></td>
</tr>
<tr>
<td>more government telling us what to do</td>
<td>my field won’t dry out in spring for timely planting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I just grow corn and soybeans</td>
<td>Allelopathy effect of rye will hurt corn yields</td>
<td></td>
<td></td>
</tr>
<tr>
<td>my system is fine—what more can I do</td>
<td>more weed problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don’t see the big farmers doing cover crops</td>
<td>costs of planting far exceed benefits of covers without cost share programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When people are stressed—how do we change?</td>
<td>If cover crops were so great, how come more don’t do it</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 2016-Test Plot Results of Corn following Soybeans

<table>
<thead>
<tr>
<th>Acre.</th>
<th>Bu/Acre</th>
<th>% Moisture</th>
<th>Covers vs tillage</th>
</tr>
</thead>
<tbody>
<tr>
<td>.73</td>
<td>237</td>
<td>16.3</td>
<td><strong>Cover</strong>/ No Till</td>
</tr>
<tr>
<td>.74</td>
<td>244</td>
<td>16.0</td>
<td>Chisel/Cultivated</td>
</tr>
<tr>
<td>.74</td>
<td>249</td>
<td>16.5</td>
<td><strong>Cover</strong>/ No Till</td>
</tr>
<tr>
<td>.75</td>
<td>252</td>
<td>16.1</td>
<td>Cultivate</td>
</tr>
<tr>
<td>.75</td>
<td>249</td>
<td>16.7</td>
<td><strong>Cover</strong>/ No Till</td>
</tr>
<tr>
<td>.72</td>
<td>251</td>
<td>16.6</td>
<td>No Till/No cover</td>
</tr>
<tr>
<td>.72</td>
<td>253</td>
<td>16.3</td>
<td><strong>Cover</strong>/ No Till</td>
</tr>
</tbody>
</table>

*Note: The table shows the yield (Bu/Acre) and moisture content (%) for different plots, along with the type of cover and tillage used.*
Manure

Use low disturbance injection tool to apply manure over living cover crop.
Cereal Rye cover crop planted last September after corn silage harvest
Cereal Rye cover crop planted last September after corn silage harvest
Soil Loss by Field

Soil Loss as Tons/Acre/Year

[Bar chart showing soil loss by field, with labels for Rot Avg Soil Loss and Soil T]
Phosphorus Index
By Field

Avg PI
Annual Total PI
SUMMER AFTERNOON ON BEAVER DAM LAKE WITH FARMERS
2018 Activity and Beyond

- Group organized as 501c3 & bylaws
- On-farm research with UWEX
  - Intercropping study
  - Clover Legume Nitrogen study
- Cover Crop Cost-Share program
- Water Infiltration tests
- Nitrogen Use Efficiency study-Discovery Farms
- Possible Nitrogen Bioreactor???
- August 3 On-Farm educational event
- Fall tour
- Plan for 3rd annual winter workshop
Thank You Farmers & Partners!

Lake Groups

Agencies

Academics

Others

Photo-Content Credit:
Robert Bird; LWCD
Bill Boettge; BDLIA
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