Innovative Cover Crop Strategies

Yahara WINS Meeting- 3/16/21
Dane County LWRD and Extension
Marie Raboin & Chelsea Zegler
What?

- Roller Crimper
  - Front Mounted- McFarland
    - Can plant while rolling (1 pass system)
    - Soybeans
    - $8,400 + $5,475 (3 pt mount) = $13,944
- In-row – Dawn Equipment Company
  - Between corn planting rows
  - No-till planting into bed pack
  - Foldable for easy transportation
  - $10,900 (12 row - used)

- Actual Equipment Cost- $24,844 (WINS Portion $9,500 for equipment)
Who and Where

• Bruce and Karl Sime of Stoughton, WI
• Dairy until 2018 -> Steers and Cow/Calf Pairs
• 700 acres + custom work
• Badfish watershed
• Program participants
• Community Leaders
  • Lead farmer of Biological Farmer Friends (DATCP Producer Led Watershed Group)
  • Town board member
  • Influencer farm
Why?

• Allow cover crops to grow longer into season to continue erosion control
• Decrease number of passes associated with cover crops
  • 1 pass system- terminate cover crop and plant cover crop at same time
    • Decrease labor and fuel cost
  • Reduced herbicide use
    • Herbicide resistant weeds
    • Create thick mat for weed control (organic producers championed the technology)
• Soil Health- maintain living root 365
• Misconceptions about cover crops still exist
Results- Phosphorus Reduction - Ex. 1

• Planting Green
  • 105 acres
  • Previous rotation was a traditional corn/soy rotation, including spring chisel plow
  • New rotation was a corn/soy rotation with aerial seeded cereal rye, terminated with the crimper, 100% no-till.
  • SnapPlus calculated a reduction in the PI from 8 to 1.
  • 105 acres X 7 lbs P/ac/year = 735 lbs P/yr reduction
Results- Phosphorus Reduction – Ex. 2

• No-till Bedpack Manure Management
  • 20 acres
  • Previous rotation was a traditional corn silage/soy rotation with 10 tons/ac of bedpack manure applied in the spring and incorporated with a chisel plow and disk.
  • New rotation was 100% no-till corn silage/soy rotation. The roller crimper allowed for no-till planting into bedpack, which is traditionally incorporated.
  • SnapPlus calculated a reduction in the PI from 11 to 3.
  • 20 acres X 8 lbs P/ac/year= 160lbs P/ yr reduction
Results- Phosphorus Reduction

• Total
  • Pounds of P loss in 2020 = 895 lbs
  • Total $/ lb P = $28/lb P
    ($24,844/ 895 lb P)
Future Plans

• Adaptive management
• Return on Investment Calculations
• Erin Silva (UW-Madison)- collaboration with EPPIC and Dodge Co Group
• FUSR Field day

• Cost share and funding dynamics????
Questions?

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