

Proceedings from the 12th Annual Nutrient Management Conference



12th Annual



**NUTRIENT
MANAGEMENT
CONFERENCE**

**Tuesday,
February 4,
2020**

**VERIZON
WIRELESS
CENTER
MANKATO**

12th Annual

NUTRIENT MANAGEMENT CONFERENCE

Sessions 9:00 a.m.-3:25 p.m.

■ GENERAL SESSION

8:30 a.m. *Registration*

9:00 a.m. *Welcome*
Tom Rothman University of Minnesota

9:05 a.m. *Lessons Learned in 2019, Opportunities for 2020*
Liz Stahl University of Minnesota
Brad Carlson University of Minnesota

9:55 a.m. *Importance of Urban and Non-Urban Nutrient Reductions*
Katrina Kessler Minnesota Pollution Control Agency

10:30 a.m. *Break*

10:45 a.m. *Farmers Working To Reduce Nutrient Losses*
Brian Ryberg, Brian Biegler, Dan Coffman

11:45 *Lunch*

■ BREAKOUT SESSION #1 - NUTRIENT REDUCTION STRATEGY TRACK

12:45 p.m. *Minnesota's Nutrient Reduction Strategy- Progress Toward Milestone Goals*
Glenn Skuta Minnesota Pollution Control Agency

1:25 p.m. *Urban Efforts to Reduce Nutrient Pollution*
Katrina Kessler Minnesota Pollution Control Agency

2:05 p.m. *Potential for Cover Crops to Improve Nutrient Use Efficiency*
Axel Garcia y Garcia University of Minnesota

2:45 p.m. *Tile Drainage, Cover Crops and Nitrogen Interactions*
Jeffrey Vetsch University of Minnesota

■ BREAKOUT SESSION #2 RESEARCH TRACK

12:45 p.m. *Looking at Soil Health Tests*
Anna Cates, Liz Stahl University of Minnesota

1:25 p.m. *Evaluating Biologicals*
Dan Kaiser University of Minnesota

2:05 p.m. *Updating MN's P Index*
Lindsay Pease University of Minnesota

2:45 p.m. *Liquid Swine Manure - A Viable Nutrient Source for Sidedressing Corn?*
Melissa Wilson University of Minnesota

3:25 p.m. *Adjourn*

Thank you to all
of our Supporters!

mn DEPARTMENT OF
AGRICULTURE

AFREC
Minnesota's Agricultural Fertilizer
Research & Education Council

**CLEAN
WATER
LAND &
LEGACY
AMENDMENT**

MVTL

Nutrien
Ag Solutions™

N-Serve **Instinct**
NITROGEN STABILIZER NITROGEN STABILIZER

SMBSC **AGRI-GROWTH**
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EXTENSION**

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Krusemark Farms & Creek Lake Farms

Multi-Generational Row Crop and Livestock Operation

Strip-Till Hog Manure Injection



Helping Hands



Natural and Man-made Drainage



Cover Crop Burn-Down



- 
- Soybeans in Cereal Rye, 5 weeks post planting

On The Mooooove





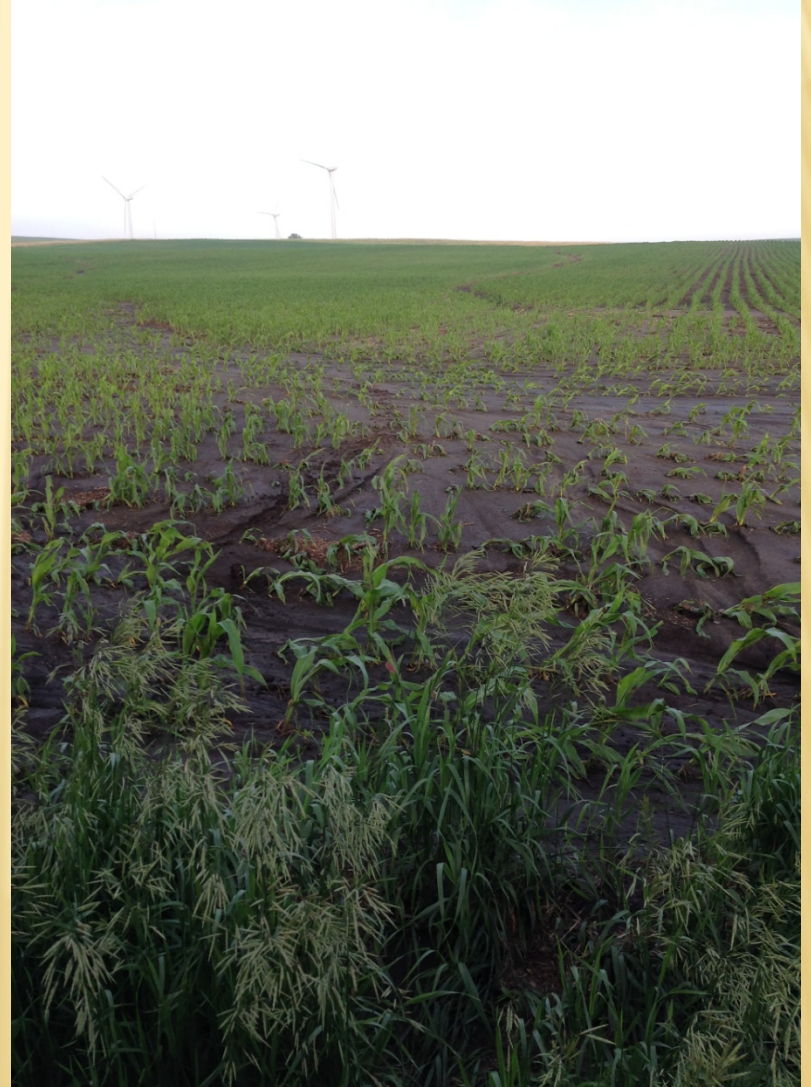


WHAT GOT ME STARTED





WATER EROSION



STRIP TILL BAR





PLANTING INTO STRIPS





60' NH₃ APPLICATOR



NO TILLING BEANS



NO TILLING BEANS



CEREAL RYE COVER CROP



PLANTING GREEN



PLANTING GREEN



COVER CROP APPLICATOR



COVER CROP APPLICATOR



SEEDING COVERS



SEEDING COVERS



COVER CROP BLEND FOR CORN



60" ROWS



MCGA

Nitrogen Smart
Discovery Farms
Conservation Tillage Conference
Minnesota Water Resource Center
Innovation Grants

Dan Coffman

Nicollet, MN



Farm Background

- **Who**
- **Location**
 - Nicollet
- **Size - 450 Acres**
- ***Soil Health, Sustainability & Regeneration***
- **CSP/EQIP Conservation Programs**
- **MN Water Quality Certified Farm**

1. Armor the Soil

- Cover Crops

- Interseed into Corn @ V4, Soybeans at leaf drop
- Utilize excess nutrients
- Prevent soil loss
- Nutrient cycling



Dan Coffman @danc... · 10/20/17 ✓

@soilwarrior great day to make some #strip17 for #plant18! Even putting #covercrops between the zone #soilwarrior

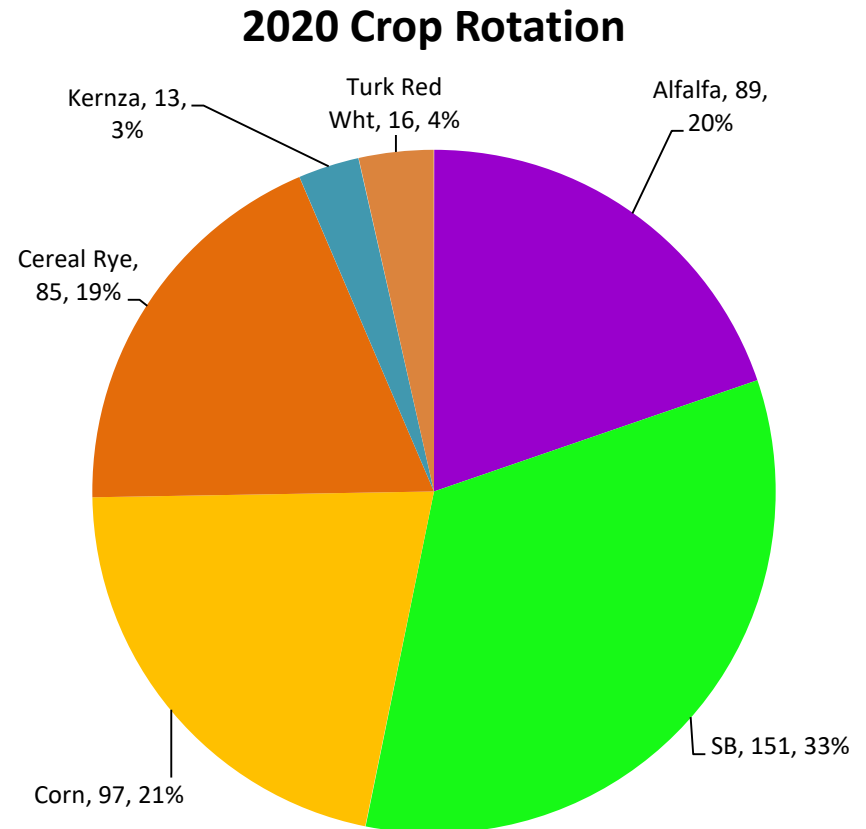


2. Minimize Soil Disturbance

- Reduced Tillage
- Strip Till
- Reducing N Rates
 - Split app to gain efficiency
 - .65# of N per bu COS, .85# of N per bu for COC
 - VRT Application
 - MDA Advanced Rate N trials

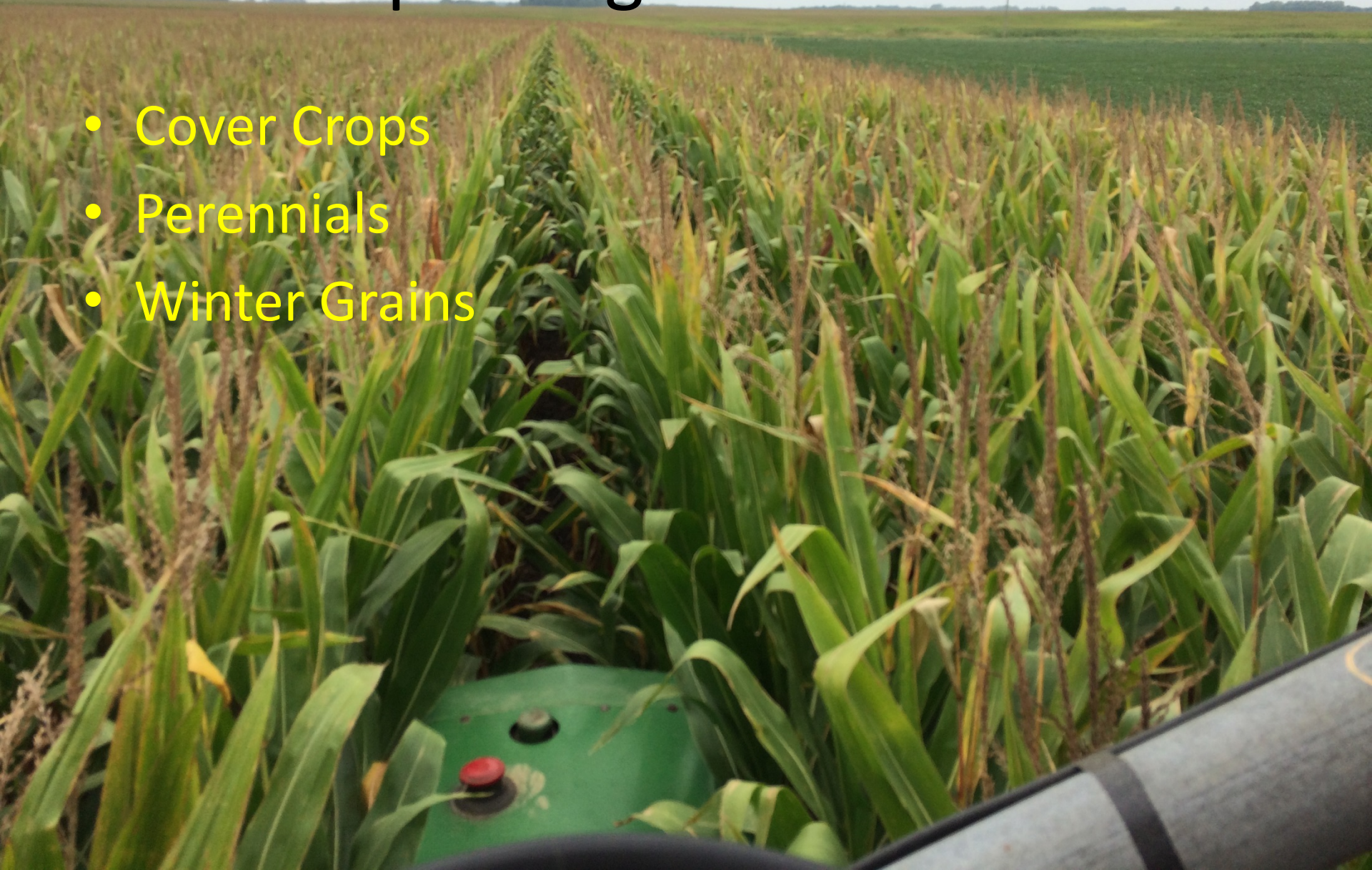
3. Increase Crop Diversity

- Corn/Soybeans
- Perennials
 - Reduced soil erosion
- Legumes
 - 0 applied N
- Shorter season crops
 - Application Timing



4. Keep Living Roots in the Soil

- Cover Crops
- Perennials
- Winter Grains



5. Integrate Livestock

- Cattle-Grazing
- Swine Manure
 - Strip till applied
 - banding



Nutrient Stewardship

- Challenges
 - Time
 - Management
 - Different
- Results
 - Reduced Nutrient Loss
 - Carbon
 - Reduced Soil Erosion
 - .25-.8 T/ac
 - Better Bottom Line

The End

- “Things that matter most should never be at the mercy of things that matter least”
 - Ranching for profit school

