Organic Weed Management

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Challenges to Organic

- Weeds
- Fertility
- Seed Genetics
- Equipment
- Time
- Yields

VS
Our System

- Start Clean
- Delay planting-plant into warm forecast
- Rotary Hoe 1-2 times
- Cultivate as soon as possible
- Ridge cultivate
- Walk for problem weeds
Tearing up cover crops/alfalfa

- John Deere 550 Mulch Master
- Chisel Plow w/Sweeps
- Moldboard Plow
- Disk
Delay Planting
  -May 10-20 Ideal
  -Weeds cause more yield loss than late planting
  -Warm Dry forecast
  -Increase Populations?

Trash whippers to move clods/residue
  -Joel Gruver WIU less weeds with aggressive row cleaners?

Be patient!!
  -2017 May 28 Corn
  -2018 May 26 Corn
Rotary Hoe

- If you can row it hoe it
- Be careful not to bury tiny plants
- Use a well maintained rotary hoe
  - Make sure all wheels and arms move freely
- Hoe spoons should be the size of a dime
Day 8 Rotary Hoeing 2018
Does rotary hoeing help?
Types of Rotary Hoes

- Case Minimum Till 181MT
  - Wheels Spaced Far apart
  - Can handle extreme residue

- John Deere 400
  - Wheels close together
  - Can plug in high residue conditions
Rotary Hoes

- Good wheels are crucial
  - Spoons should be roughly diameter of dime
  - Want lots of action
Cultivating

- Cultivision Mirror
- THE KEY TO REAR MOUNT CULTIVATION!
- Klingler Manufacturing
  - 507-359-9849
Cultivating

- **Buffalo Scout guidance hitch**
  - Poor mans GPS
  - Hydraulically steers cultivator
    - Wands follow crop rows
    - Crop needs to be 10-12 inches tall for wands to stay on row
  - Nice when they work
  - Very frustrating when they don’t
  - Heavy-move cultivator back
Cultivating

- **Buffalo**
  - Residue cutting stabilizer disk
  - Disk Hillers pull away from row 1st pass
  - Single sweep pushes loose soil back into row
  - Can handle almost any soil condition
Day 21 Cultivating
Cultivating
Cultivating

- Noble Vibra-shank
  - 5 small shanks per row
  - Good for loose soil conditions
  - Good for small plants
  - Limited residue clearance
  - Can be difficult to move enough soil into row
Cultivating
Cultivating
Cultivating
Lots of other options???

- GPS
- Flamers
- Tine Weeders
- Electric zappers
- Weed pullers