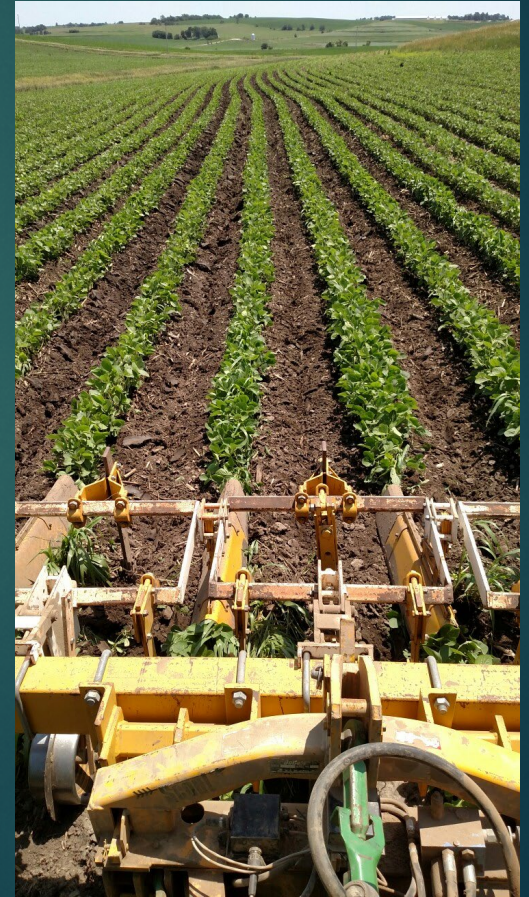


# Organic Weed Management



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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



# Planting

## 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?

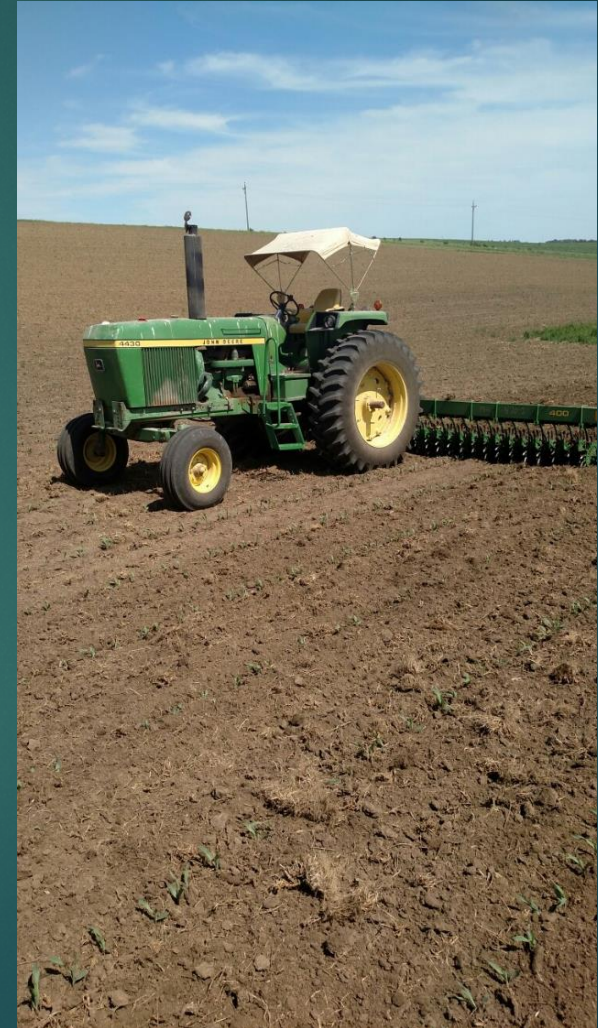
## Be patient!!

- 2017 May 28 Corn
- 2018 May 26 Corn

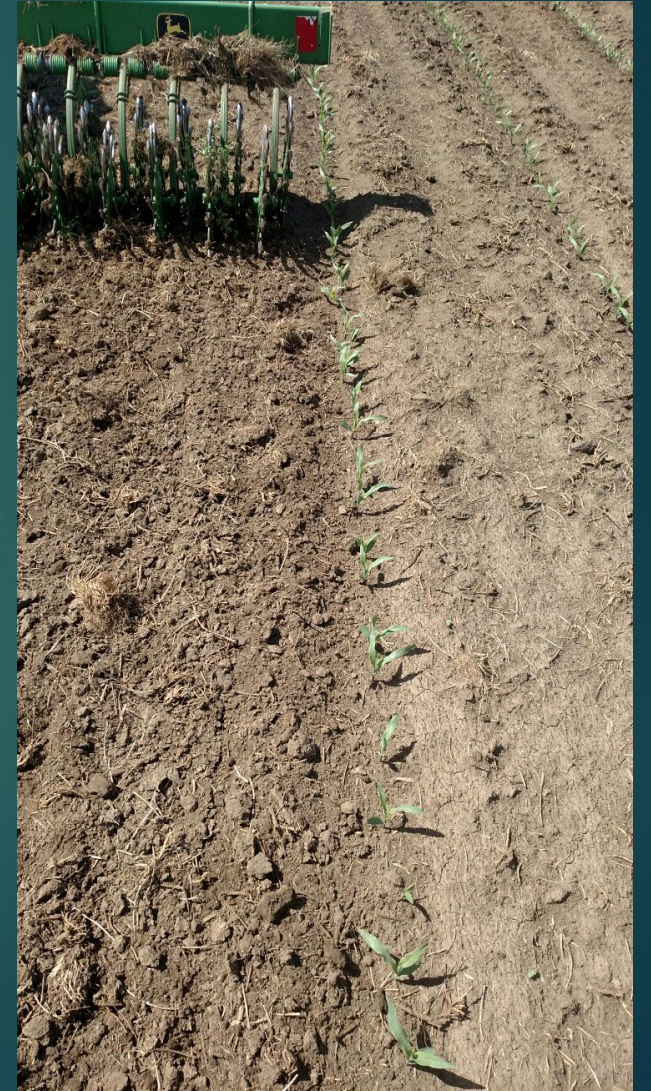


# Rotary Hoe

- ▶ 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

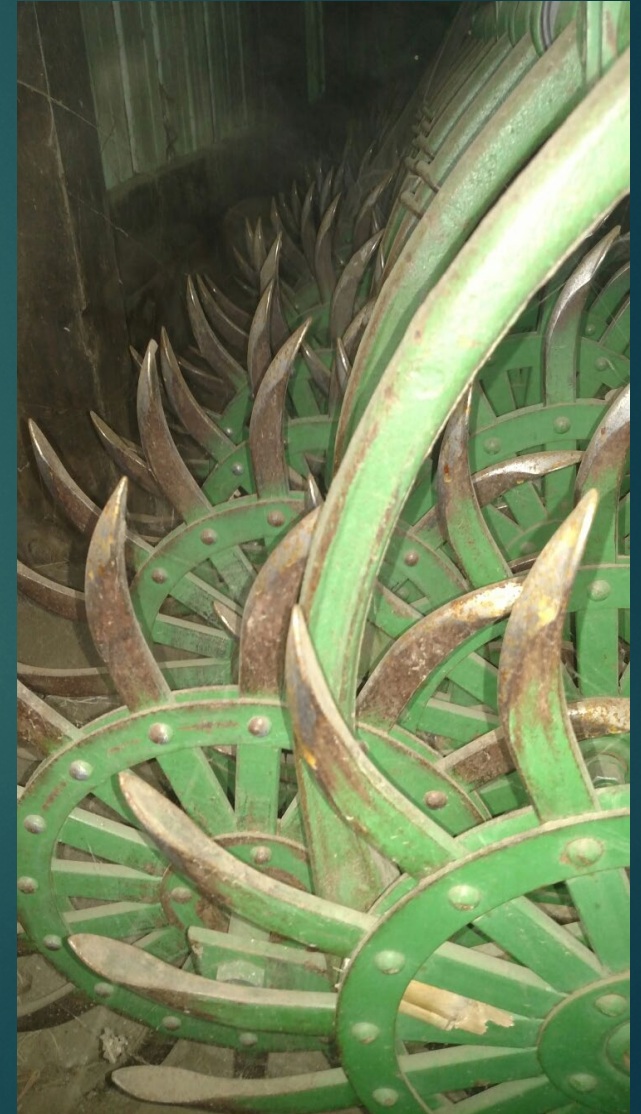


# Does rotary hoeing help?



# 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 1<sup>st</sup> pass
  - ▶ Single sweep pushes loose soil back into row
  - ▶ Can handle almost any soil condition



# Day 21 Cultivating



# Cultivating

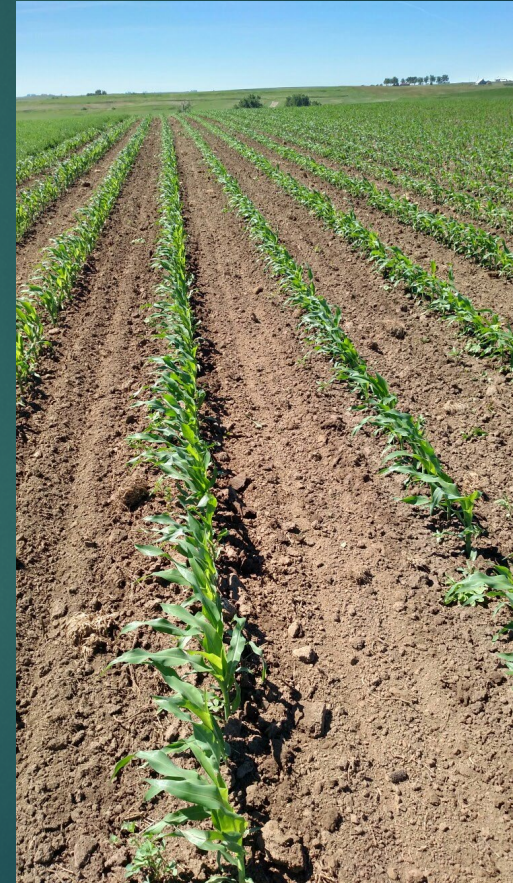


# Cultivating

- ▶ 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