Equipment for Different Situations

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Organic Weed Control Short Course
Jan. 16, 2020
• Pre-plant (including sod termination)
• Pre-cultivation (aka Blind cultivation)
• Cultivation
Pre-plant
What went wrong here?
Tearing up cover crops/alfalfa

- Landoll Chisel Plow w/Sweeps
- Cutters to slice residue
Tearing up cover crops/alfalfa

- John Deere 550 Mulch Master
- Treader wheels shake soil out of roots
- Limited residue clearance
Residue left on surface
Disk

- Case IH 496
  - 7.5 inch spacing (finishing)
  - Cuts well but limited residue burying

- Case IH 3900
  - 9 inch spacing
  - Primary tillage
Field Cultivator/Finisher

- Great plains discovator
- Strait cutters in front
- Heavy spike harrow
- 180lb shank pressure
Field Cultivator/Finisher

- Run shallow 2-3 inches
Duetz 1400
Chizelvator
Spike Tooth Harrow
Pre-cultivation (aka Blind cultivation)
Planting

- Trash whippers to move clods/residue or dry soil
Ridge Till Planting Soybeans
Pre-emerge Harrowing

- Fuerst Flex Tine Harrow
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
Day 8 Rotary Hoeing 2018
Does rotary hoeing help?
Yetter
Rotary Hoe
Avoid soybean stages 3-5
When using a Rotary Hoe

Image sourced from
www.Researchgate.net
Cultivation
Cultivating

- Noble Vibra-shank
  - 5 small shanks per row
  - Good for loose soil conditions
  - Good for small plants
  - Limited residue clearance
Cultivating
IH 133 C-Shank

- Most Common style
- Fits most situations
Cultivating

- Buffalo 4600
  - 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
Cultivating
Cultivating
Cultivating
Cultivating 2\textsuperscript{nd} pass-Ridging/Hilling
Cultivating 2nd pass-Ridging/Hilling

- Buffalo 4600
  - Ridging wings
  - Cutaway discs throwing towards row
Cultivating

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

- Buffalo Scout guidance hitch
  - Poor man's 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
Buffalo 6300 Cultivator
Wetherall
Conventional
3 shank
1st Pass
2nd Pass
Just before 3rd pass
Extra fillers if needed
Small Grains

Great Plains
1300 minimum
till Drill
Cover Crops
Mirror Mounts
When Things go Wrong
Don’t give up
When things go right