
(Trying) Till It's Right: Exploring Conservation Tillage Methods Following a Cover Crop

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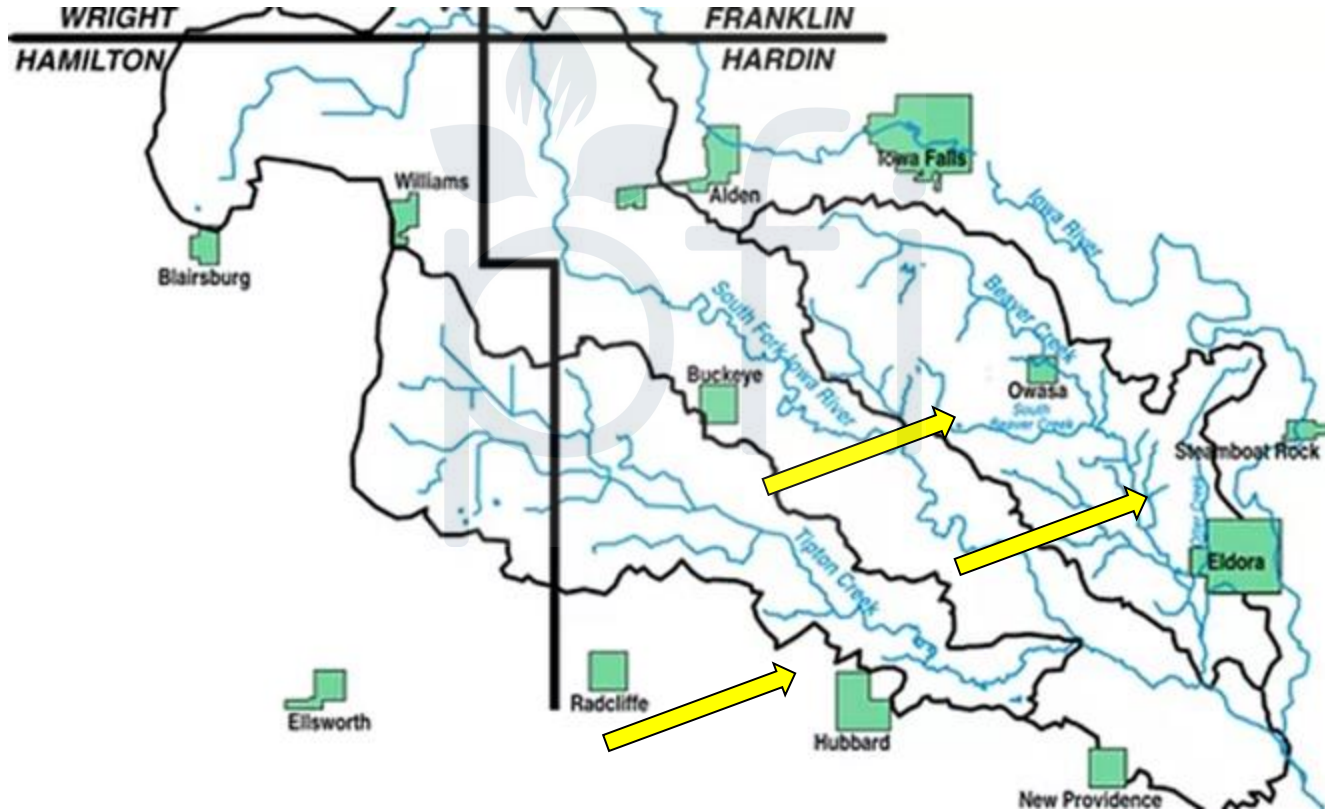
Today's touchpoints

- Intro & location
 - Outcome planning
 - What I've learned?
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Intro



Watershed of the South Fork of the Iowa River





Time context

- 15 years supporting family organic production system
- Entering 5th year of my own conventional production system (thank you PFI Find-A-Farmer)





Answers

→ There is not one singular answer



Tillage planning: understand your intended outcomes

What are you trying to accomplish?

1. I need to utilize a row crop planter to sow seed.
2. I need to apply a 2 x 2 x 2 starter fertilizer with the planter.
3. I need to utilize a coultter to side-dress liquid fertilizer.
4. I need to utilize a knife to side-dress NH₃ fertilizer.
5. I need to utilize a row crop cultivator to conduct mechanical weed control.
6. I need to utilize a platform to harvest soybeans.
7. I need to incorporate poultry litter.
8. I need to level out liquid manure tanker tracks.
9. I need to utilize a rotary hoe for pre-emerge weed control.
10. I need to utilize a residual herbicide
11. I need to accommodate X type of planter closing wheels.
12. I need to incorporate plant residue for nitrogen support.

Tillage planning: what are your contingencies?

When the first plan doesn't work, what is your alternative?

1. Wet fall / wet spring
2. Weed control challenges
3. Equipment breaks
4. Poor combine MOG distribution



Tillage scenario plan: planter outcomes



The 3 C's of Emergence

- **Clean:** Remove as much residue as possible without removing soil and maintain row unit ride quality.
- **Create:** Create a furrow with integrity that will survive long enough for a seed to make it to the bottom of the trench before being easily destroyed.
- **Close:** Properly close the trench and ensure 100% seed-to-soil contact while managing the soil density above the seed.

Strip till with herbicide termination



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Strip till with herbicide termination



Mechanical termination





Summary

- Multi-year & full production system plan
- What are your contingencies?
- Millimeter level details
- Learn from others
- Used parts are awesome



Thank you

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