



Row Cleaner Evaluation in limited irrigation no-till corn

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Overview

Excessive surface residue from continuous irrigated corn can create numerous problems at planting time including:

1. Poor seed placement (variation in seed depth)
2. Poor seed slot closure (slot is left open)
3. Poor germination environment (cold, wet conditions)

Overview

These tools can be used to manage surface residue

1. tillage/mowing/chopping
2. grazing
3. cover crops
4. strip tillage
5. row cleaners

For this study, we are primarily focused on evaluating row cleaners.

Plot Setup

- Limited irrigation (<13 ac/in per year).
- 100% continuous no-till management.
- Limited grazing & cover crop use.
- Rotation is corn-corn
- JD 24-row NT1770 planter with:
 - Martin 1360 floating row cleaners
 - Precision Planting CleanSweep system
 - Keeton seed firmers with Mojo Wires
 - Thompson T-wheels
 - Kugler KQ652 Starter at 7gpa rate in furrow









No Row Cleaners

Row Cleaners



No Row Cleaners

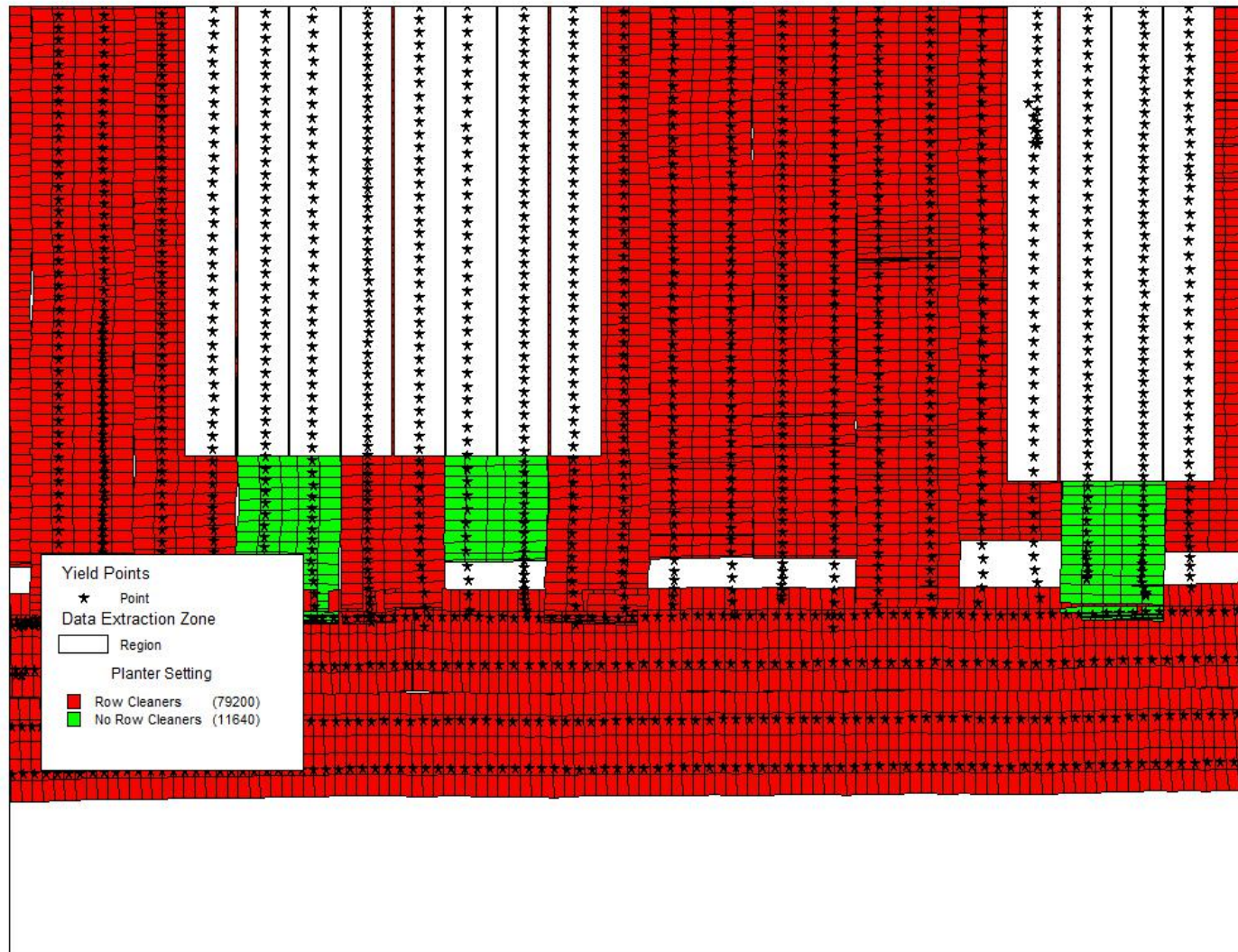
Row Cleaners



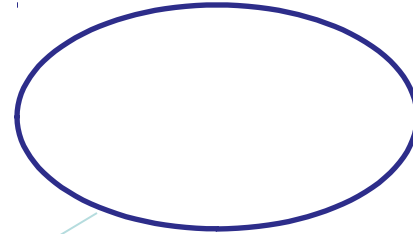
Plot Layout

- Using the CleanSweep system, the row cleaners were simply moved away from the ground on a number of full passes across seven limited irrigation fields in 2016.
- These plots were documented at planting time.
- Plot size = 30' (12 rows) x 1700+'
- Yield data was obtained from John Deere AMS systems.
- Planting data was exported from AgStudio, then MapInfo was used to perform all of the data extraction.
- Finally, Excel was used to analyze the data set.

Standard Strip Trial



Results 2016



No Difference!

Table shows reps, averaged by Field. Total observations = 58

Conclusions

I really didn't expect to see no difference, let alone a small bias towards No Row Cleaners (-0.12 bu/ac). Row cleaners logically should provide a better planting environment, which in turn should improve stand, uniformity and ultimately result in higher yields. Even in the field, I've always "felt better" about how the rows looked while using row cleaners.

Although we had a lot of reps, they were all from the same year; hence it will be necessary to perform this test over a number of years in order to gain confidence in the results.

Questions?

Thanks to the KARTA group for funding this project