

A photograph of a lush green winter wheat field under a clear blue sky. The wheat stalks are tall and dense, filling the foreground and middle ground. The sky is a pale, clear blue, occupying the top portion of the image.

AgriSolutions Ascend In Winter Wheat -A Plant Growth Regulator

**20th Annual Kansas Ag. Research & Technology
Association (KARTA) Conference**

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www.kartaonline.org

Kastens Inc. Farms
Rawlins County, Kansas
28339 Rd BB
Herndon, KS 67739
www.kastensinc.com



Overview

- AgriSolutions Ascend is promoted as a plant growth regulating product that is effective in increasing root mass and volume. This increased mass/volume are able to increase the uptake of water and nutrients, thus increasing yields.
- Ascend was seed applied by CHS at a rate of 6oz per 60lb of wheat (1 bushel). All plots were placed on dryland acres using 100% no-till methods.
- <http://www.winfield.com/Products/ProductCategory/ProductDetail/ECMD2-0058473>

Procedure

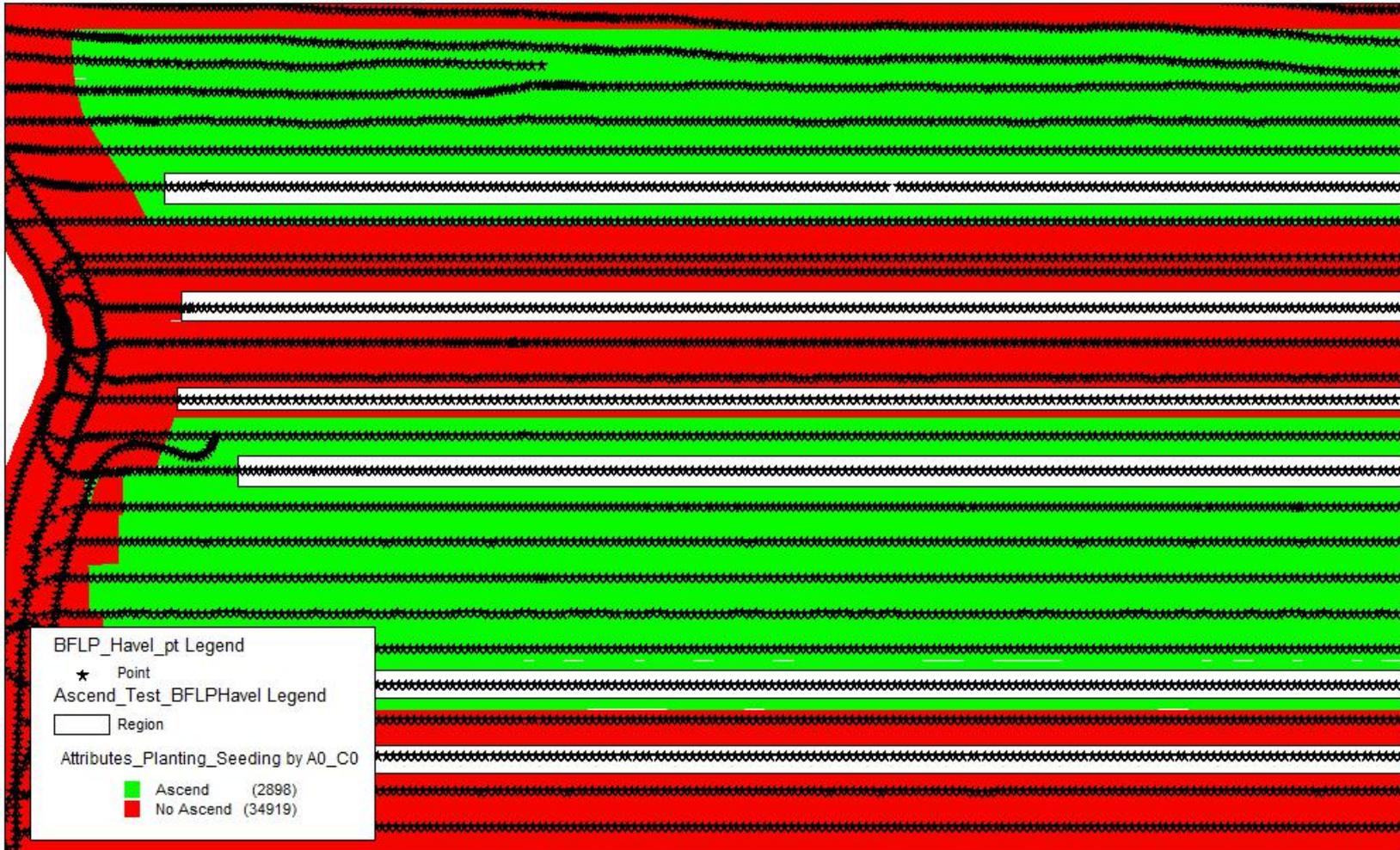
- A pro-box was filled with wheat and taken to CHS for Ascend treatment. This box was then dumped into an empty tank on our 1910 commodity cart
- John Deere 1890 air drill with 3 tank 1910 cart
- Yield data came from John Deere systems.
- Data was exported from AgStudio software, and data extraction was performed using MapInfo software.
- Analyses were performed in Excel.



Data

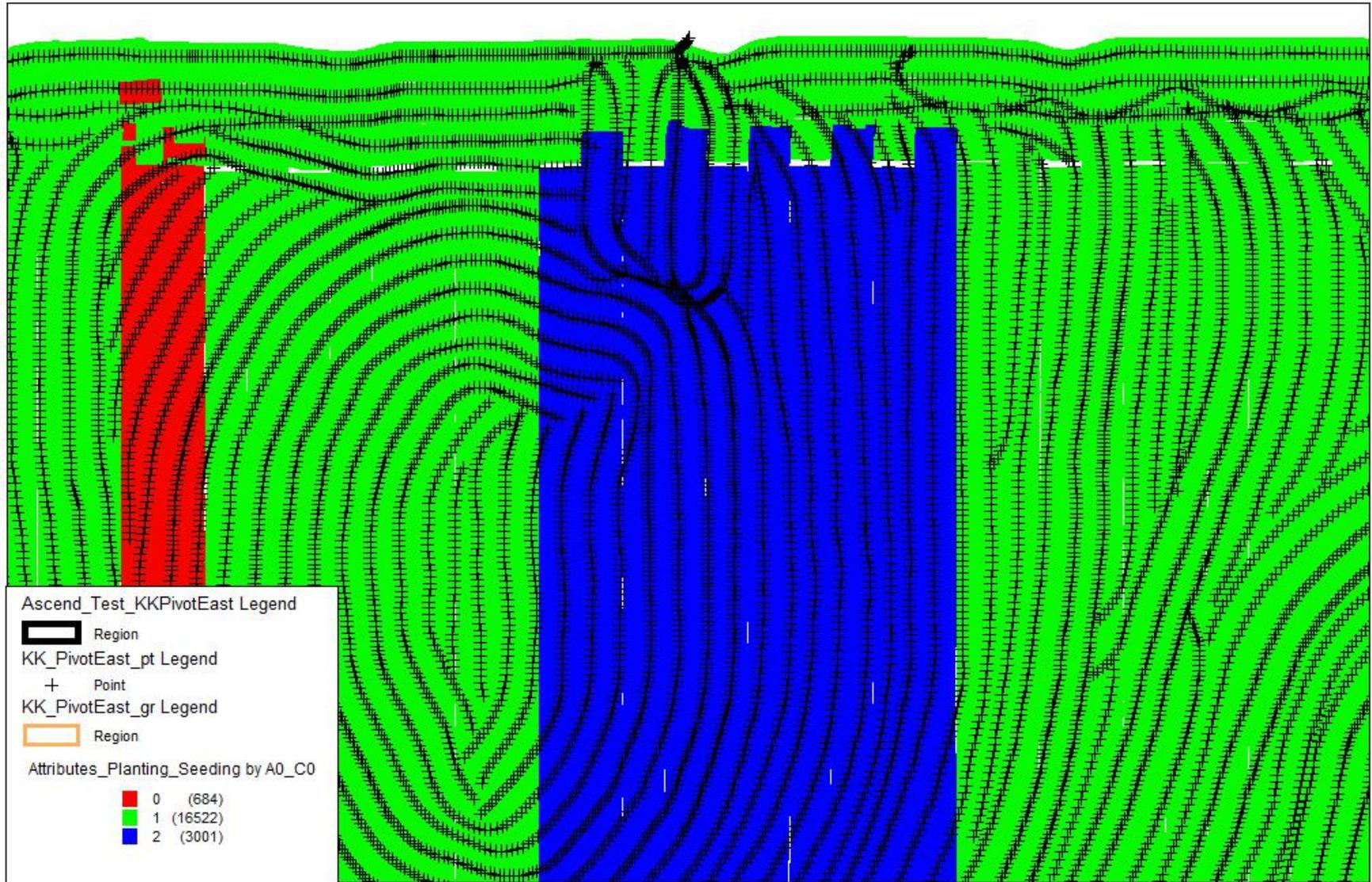
- If harvest can occur in straight lines, then a normal strip trial approach was taken capturing just the representative combine passes.
- If harvest occurs on the contour, then wider strips are used along with the gridded yield data from MPGM.

Standard Strip Trial



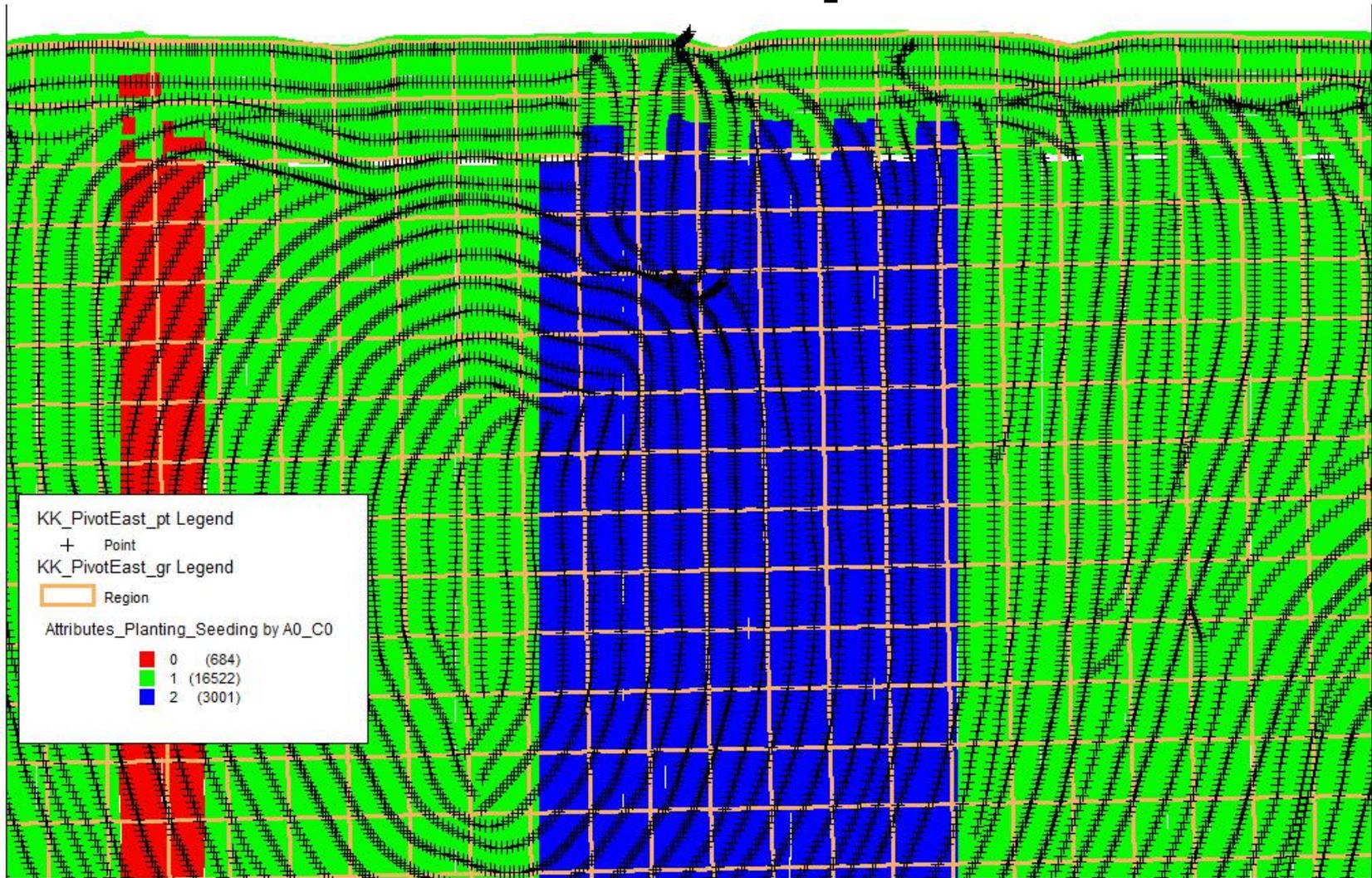
Planting and Harvest passes are perfectly parallel to each other.

Non Standard Strip Trial



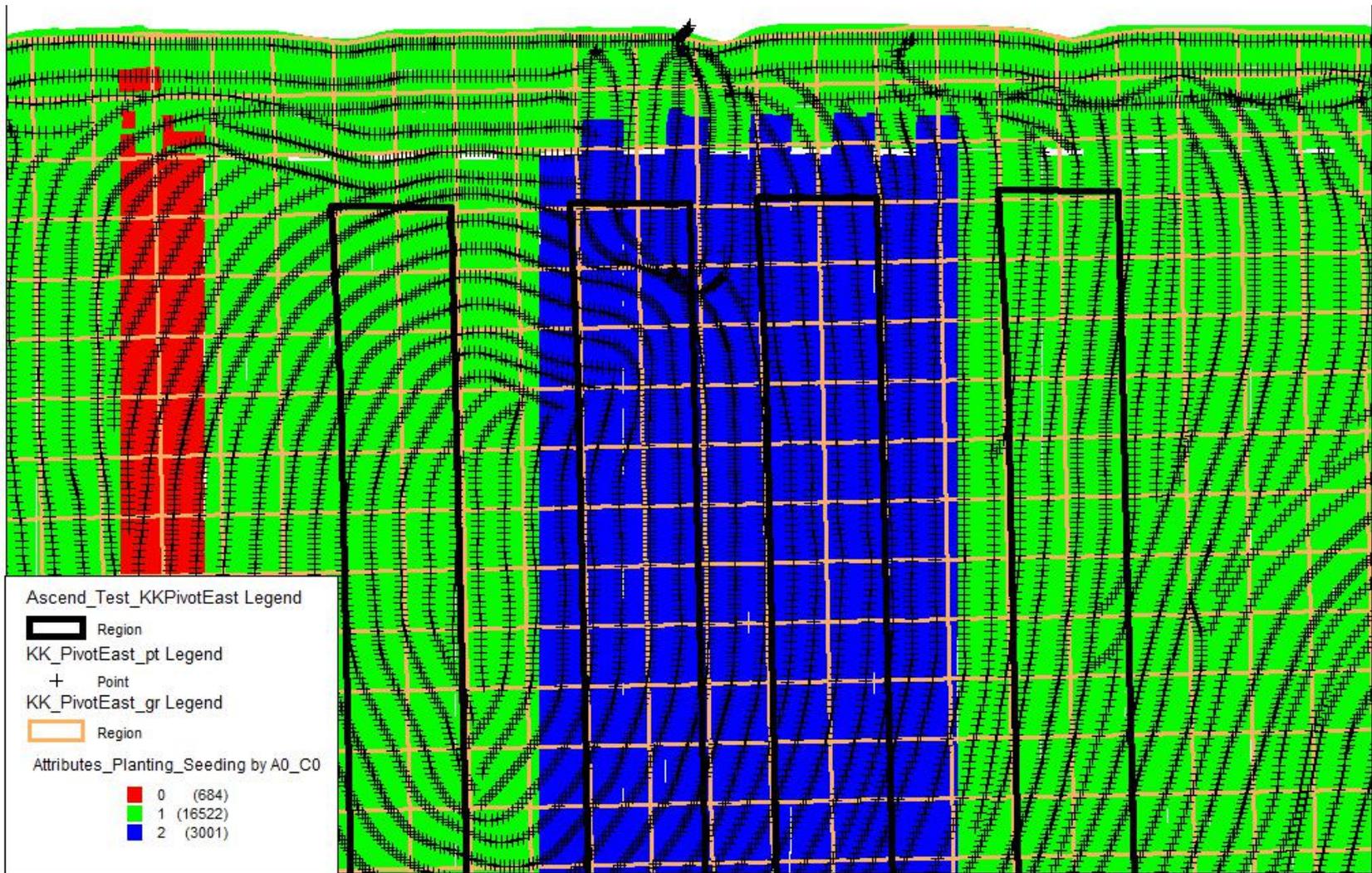
Planting is straight, but harvest is on the contour

Non Standard Strip Trial



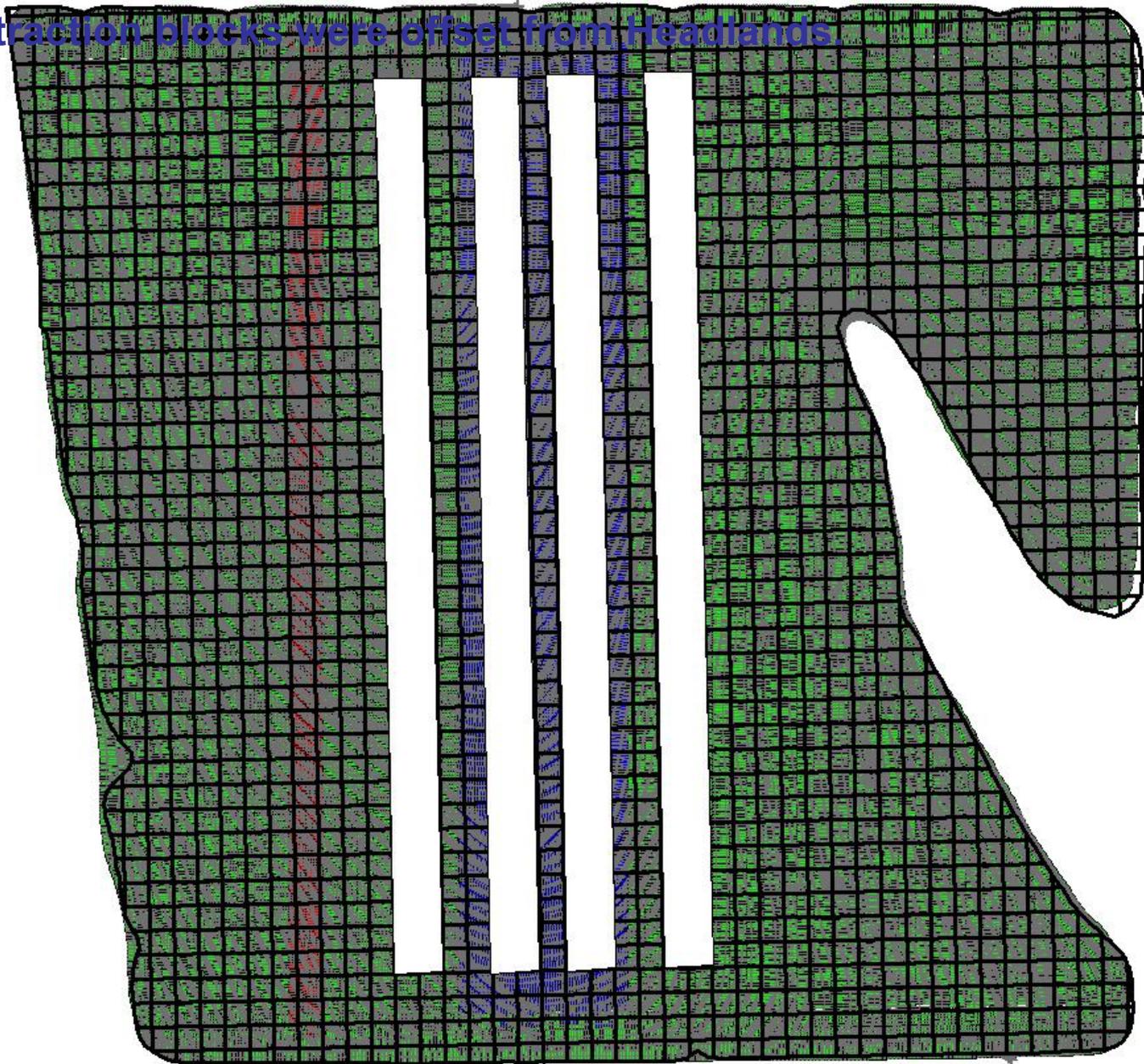
Planting is straight, MPGM yield grids are used for messy data

Non Standard Strip Trial



Wider extraction blocks are used to capture yield grids

Data extraction blocks were offset from Headlands.



Data

- Strip trials were used in 2014-2016 to evaluate Ascend treatment.
- Number of replications per year:
 - 2014: 1st year of trial, 6 replications across 3 fields
 - 2015: 2nd year of trial, 8 replications across 2 fields
 - 2016: 3rd year of trial, 5 replications across 2 fields

Results 2014-2016

Table shows reps, averaged by Year. Total observations = 19

*Not Significant at 0.10

Conclusions

In this study, had we used a large enough significance level to declare that the Null is in fact false (there “is” a benefit to using Ascend), the resultant difference (0.74 bu/ac) is trivial.

As Ascend has a cost of \$0.76/oz. and 5.6oz/ac is the application rate, the total cost (with treatment) is \$6.98/ac. With corn at \$3.63/bu (01/15/17), it would require either a 250%+ increase in yield anomaly (**to 1.9 bu/ac**), or in price (**to \$9.45/bu**) just to break even.

Conclusions

This was our final year for assessing Ascend on winter wheat.

The resultant study indicates that:

- There might be a “true” statistical benefit to Ascend, but it is trivial.
- Even if we had greater confidence in the benefit, the yield advantage does not cover the product cost.

We will not be adopting Ascend technology for winter wheat production at this point in time.

Questions?

Thanks to the KARTA group for funding this project