CORN YIELD RESPONSE TO PLANTING SPEED – COASTAL EAST

TRIAL OVERVIEW

An optimum at-harvest plant population is required to help realize the yield potential of a corn product. As growers increase their acreage, increasing planting speed may be considered to cover more ground in the same planting window.

RESEARCH OBJECTIVE

The objective of this experiment was to understand how planting speeds can affect corn seed placement and yield response.

Location	Soil	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield/Acre	Planting Rate/Acre
Maxton, NC	Sandy Clay Loam	Cotton	Conventional	03/29/2017	08/24/2017	N/A	32,000 seeds

SITE NOTES:

- Treatments were planted at the Regional Technology Center (RTC) in Maxton, NC with a CASE IH 1215 Rigid Mounted planter with 20/20 SeedSense®, CleanSweep®, DeltaForce®, and vSet® equipment attachments.
- Each treatment was planted on conventionally-tilled flat ground in 12 row strips with 20-inch row spacing.
- Final plant stand was determined by taking the average of four 20-foot long sections throughout each planted strip and converting to average plants per acre.

UNDERSTANDING THE RESULTS

Figure 1. Planting speed of each treatment, as monitored by the Climate FieldView™ Cab app.

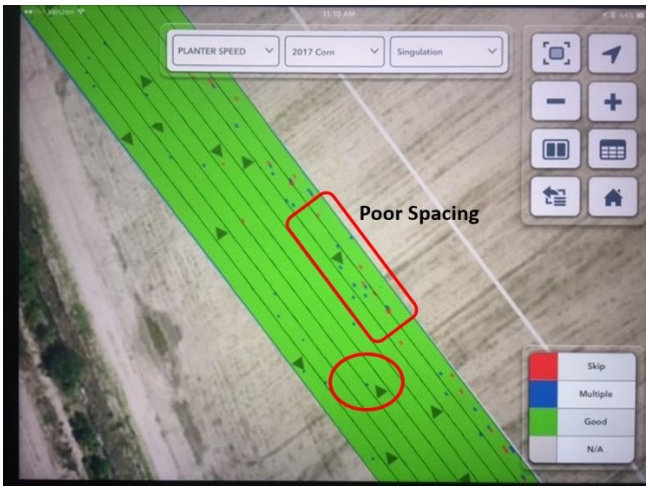

Figure 2. Planter singulation of each treatment, as monitored by the Climate FieldView™ Cab app.

Treatment	Planter Speed	Final Plant Stand	Harvest Moisture	Average Yield (bu/acre)	Average Bushels Lost per Acre	Price of Corn per Bushel	Dollars Lost per Acre
1	4.9 mph	31269	17.2%	233	0	$3.45	$0
2	5.4 mph	30336	17.3%	233	0	$3.45	$0
3	6.6 mph	28936	17.2%	230	-3	$3.45	-$10.35
4	8.0 mph	28702	17.3%	229	-4	$3.45	-$13.80

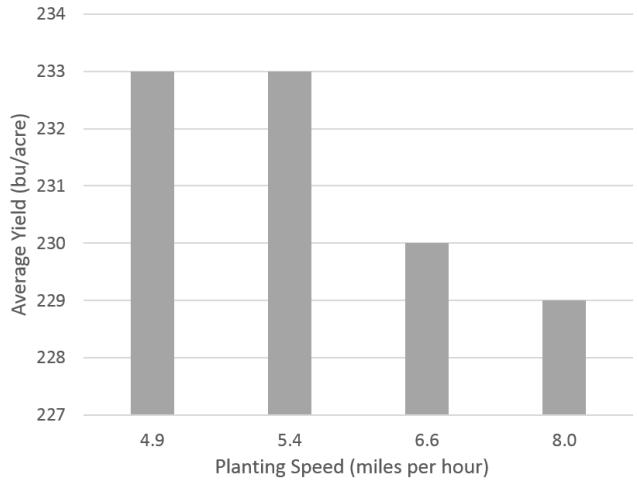

Figure 3. Average yield (bu/acre) for each treatment.

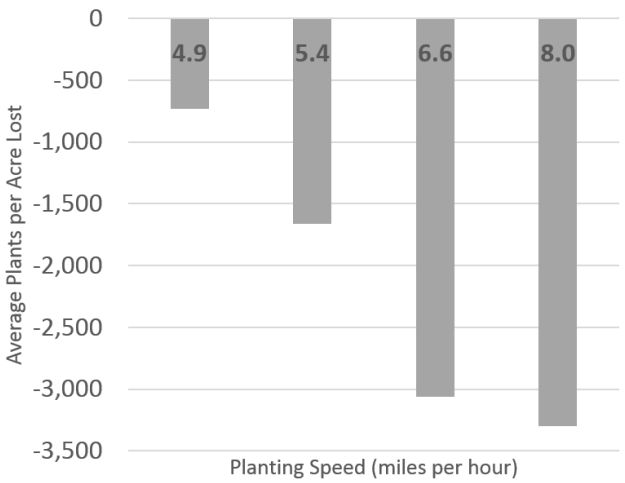

Figure 4. Average number of plants lost per acre for each treatment compared to a target population of 32,000 plants per acre.

- Increased planting speed resulted in poor corn seed singulation and less than optimal plant stands. At this location, increased planter speed had a negative effect on corn yield.

WHAT DOES THIS MEAN FOR YOUR FARM?

- Data demonstrates how growers may want to evaluate potential yield loss when planting at speeds that exceed planting accuracy.