Nitrogen Placement During Sidedressing

Trial Objective

- Nitrogen is a major investment in corn production and its placement influences nitrogen uptake by the crop and subsequent potential yield.
- The objective of this three-year study was to determine if an advantage exists for the placement of nitrogen in a sidedress application. Nitrogen was placed at the base of the plants or in the center of the row at V6 growth stage.

Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Monmouth, IL	Silt loam	Corn	Conventional	4/27/18	9/24/18	250	36K

- A 114 RM SmartStax® RIB Complete® corn blend product was planted on April 27th using 32% urea and ammonium nitrate (UAN) (32-0-0) as a nitrogen source.
- Prior to planting 80 lb/acre of actual nitrogen was applied and incorporated. At growth stage V6 (6 leaf collars), an additional 100 lb/acre of actual nitrogen was applied with a urease inhibitor. Applications were made using either a 360 Y-DROP® applicator to the base of the plant, or a rolling coulter with a shallow knife applicator in the center of the row.
- There were four replications of each treatment.

Understanding the Results

- The data from 2018 alone as well as the three-year average of data from 2016, 2017, and 2018 are shown in Figure 1. In 2018, the average yields for both methods of application were similar as was the average yield for all three years when made at the V6 growth stage. However, farmers should understand that corn height will limit application timing with a toolbar as compared to using a 360 Y-DROP® that has greater flexibility with regard to timing of application.

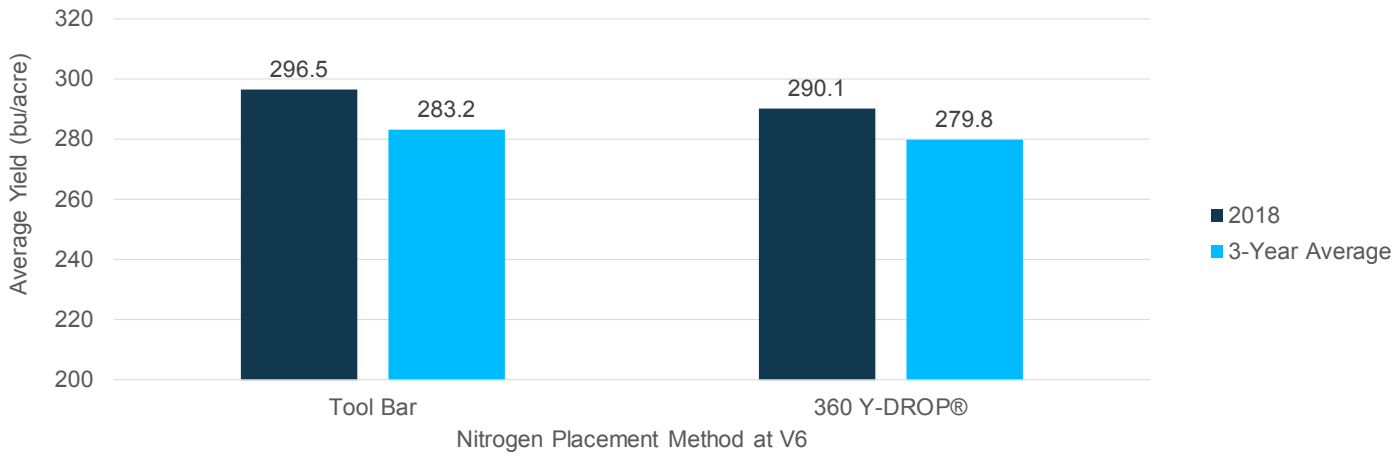

Figure 1. Average corn yield as influenced by nitrogen placement in 2018 and the three-year average (2016 – 2018) when applied at the V6 growth stage.

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What Does This Mean For Your Farm?

- Corn height limits the use of a toolbar for nitrogen application.
- A 360 Y-DROP® applicator allows for a wider application window and is not limited to just early-season applications.
- The ideal placement of sidedressed nitrogen can change from year to year due to weather and environment.
- Individual corn products may respond differently to the timing of nitrogen application. Consult your local seed specialists for recommendations.
- Yield differences may not be economically feasible when all costs are considered. Local costs should be evaluated when making nitrogen management decisions.

Legal Statements

The information discussed in this report is from a single site, replicated demonstration. This information piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

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IMPORTANT IRM INFORMATION: RIB Complete® corn blend products do not require the planting of a structured refuge **except** in the Cotton-Growing Area where corn earworm is a significant pest. SmartStax® RIB Complete® corn blend is not allowed to be sold for planting in the Cotton-Growing Area. **See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.**

Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

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Roundup Ready 2 TECHNOLOGY

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