



# Nitrogen Application Timing Across Different Corn Products

## Trial Objective

- Nitrogen is a substantial input cost in corn production. Knowledge of corn product response to nitrogen application timing can assist farmers in being more effective with input dollars.
- The objective of this study was to determine if a relationship exists between nitrogen application timing and yield of corn products.

## 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	05/08/18	09/26/18	250	36K

- Fifteen corn products ranging from 108 to 116 relative maturity (RM) were planted at 36,000 seeds/acre on May 8<sup>th</sup>.
- Nitrogen in the form of 32% urea and ammonium nitrate (UAN) (32-0-0) was used.
- Two nitrogen strategies were used:
  - Prior to planting 180 lb/acre of 32% UAN was applied and incorporated
  - Prior to planting 140 lb/acre of 32% UAN was applied and incorporated followed by 40 lb/acre of 32% UAN with a urease inhibitor side dressed at the V6 growth stage
- Two replications of each treatment were used.

## Understanding the Results

- The split application of nitrogen provided a yield increase over a single application across all products tested. The increase in yield ranged from just over 5 bu/acre to 38 bu/acre.

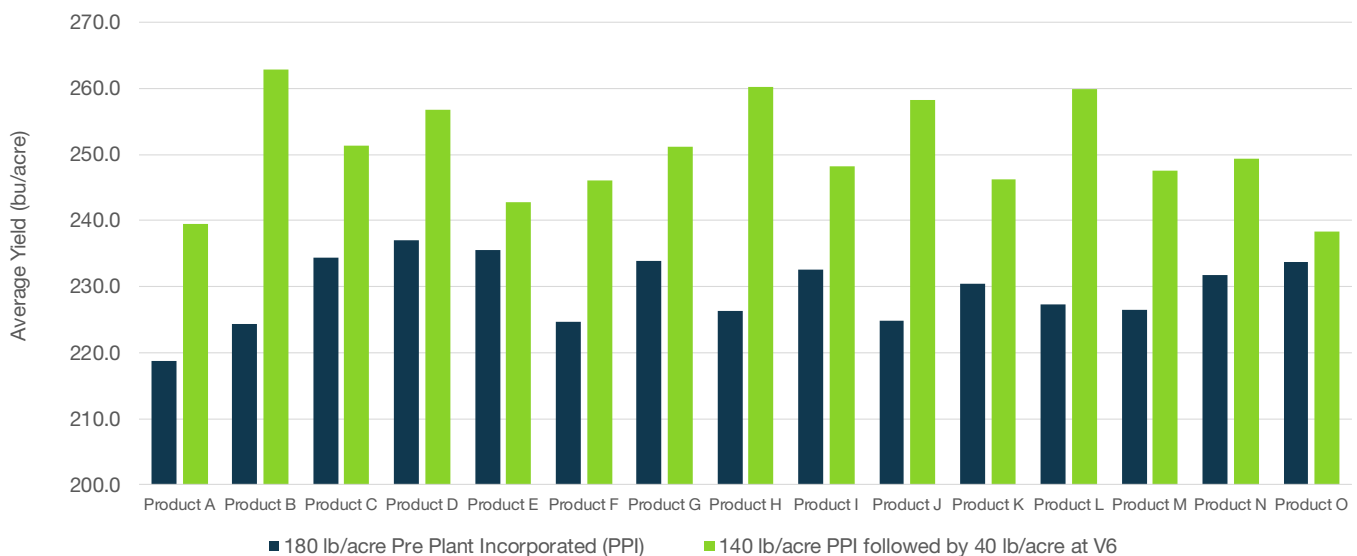


Figure 1. Average yields of corn products in the different nitrogen strategies.



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## What Does This Mean for Your Farm?

- In 2018, nitrogen was a limiting factor for corn yield in Monmouth, IL. This was most likely due to delayed residue breakdown in the spring and a lack of rain in June and July.
- In 2018, most corn products showed a response to a split application of nitrogen.
- Individual products may respond differently to the timing of nitrogen application. Consult your local DSM or Technical Agronomist for recommendations.
- Consider all local costs 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.

**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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