Corn Product Response to Nitrogen Rate

Trial Objective

- Nitrogen (N) is an expensive yet necessary input in corn systems.
- Proper N application rates can help maximize corn yield potential and efficiency while minimizing environmental losses.
- Corn products may have different responses to additional N.
- This trial evaluated corn product yield response to N application rate.

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	Soybean	Conventional	5/13/20	10/9/20	250	36K

- Treatments consisted of eight corn products planted at 36,000 seeds/acre with three different N rates applied:
  - 0 lbs/acre
  - 120 lbs/acre
  - 240 lbs/acre
- Nitrogen in the form of 32% urea and ammonium nitrate (UAN) (32-0-0) was applied preplant and incorporated.
- Plots were harvested and adjusted to 15% moisture
- There were three replications of each treatment.

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Understanding the Results

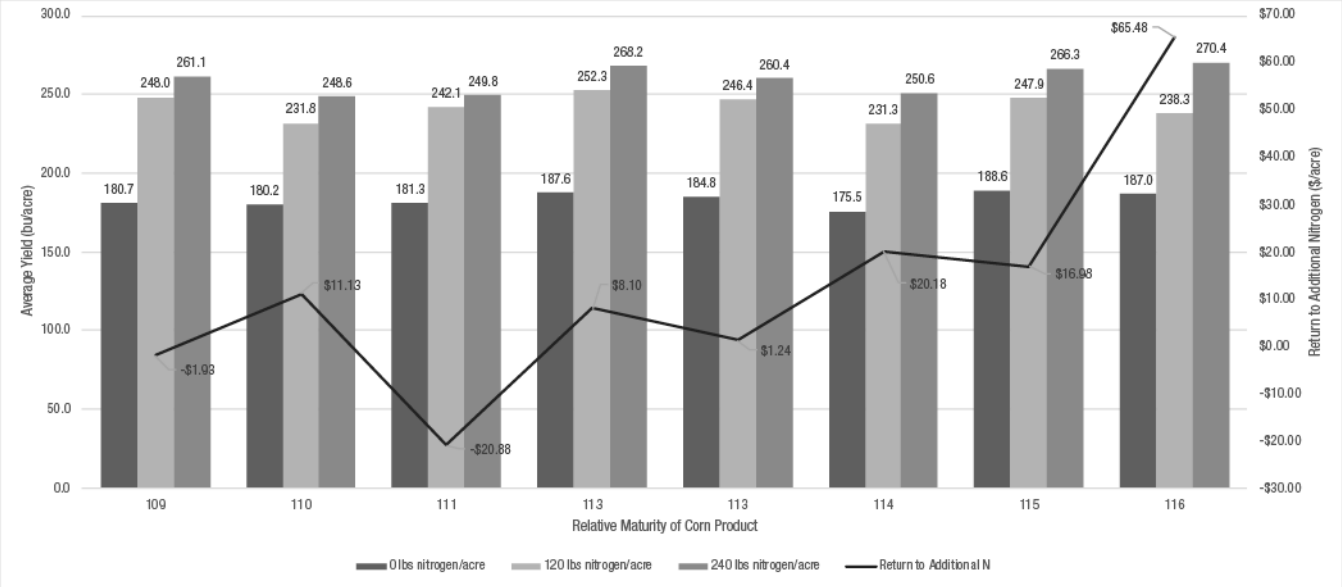

Table 1. Average yield response and return of additional nitrogen ($/acre) by corn product and nitrogen treatment (120 lbs N/acre and 240 lbs N/acre). Calculation assumes a $3.53/bu corn market price and $.40/lb for N.

- Response to N rate treatments varied by corn product.
- When factoring in N cost, increasing N rate was not always profitable.

Key Learnings

- Many factors, including product genetic background, soil type, weather, previous crop, tillage, etc., can influence the yield response and profitability potential of a N application.
- It is important to consider yield goals and N cost when making management decisions.
- Response to N can vary from year to year. Consult your local Field Sales Representative or Technical Agronomist for recommendations for your farm.

Legal Statements

The information discussed in this report is from a single site, replicated demonstration. This informational 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.