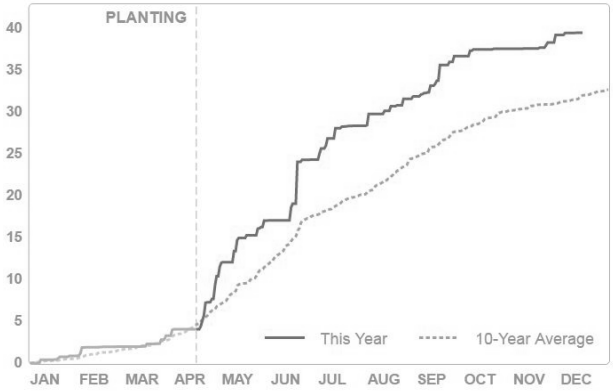
Sidedress Nitrogen Application Rate Comparison

Study ID: 004053201601
County: Dodge
Soil Type: Moody silty clay loam 0-2% slope; Moody silty clay loam 2-6% slopes
Planting Date: 4/15/16
Harvest Date: 10/31/16
Population: 34,000
Row Spacing (in): 30
Hybrid: Hoegemeyer 8470
Reps: 4
Previous Crop: Soybean
Tillage: Turbo-till
Herbicides: ***Pre:*** 2.4 qt/ac Keystone® LA on 4/16/16
Post: 32 oz/ac Roundup®, 0.75 oz/ac Armazon™; 0.5 lb/ac Atrazine on 6/2/16
Seed Treatment: Poncho 250
Foliar Insecticides: 3 oz/ac Capture® LFR®
Foliar Fungicides: 10 oz/ac Headline AMP® 7/15/16
Fertilizer: 70 lb/ac 32-0-0 on 4/16/16 and variable sidedress amounts
Irrigation: Pivot, Total applied: 3"
Rainfall (in.):



Introduction: The objective of this study was to evaluate sidedress N rates. The producer's normal sidedress N rate is 140 lb N/ac. To test this rate, the producer compared 110 lb N/ac and 170 lb N/ac. Sidedress application treatments were made on June 9, 2016 with 32% UAN. The UNL N rate calculator suggested a sidedress rate around 80 lb N/ac.

Results:

	Harvest Stand Count (plants/acre)	Moisture (%)	Yield (bu/acre)†	Marginal Net Return‡ ($/ac)
110 lb N/ac Sidedress	27,333 A*	15.1 A	247 A	707.15
140 lb N/ac Sidedress	28,708 A	15.1 A	250 A	703.70
170 lb N/ac Sidedress	28,083 A	15.5 A	249 A	688.05
P-Value	0.1903	0.3622	0.5325	N/A

*Values with the same letter are not significantly different at a 90% confidence level.
†Bushels per acre corrected to 15.5% moisture.
‡Marginal net return based on $3.05/bu corn and $0.42/lb N.

Summary: There was no yield difference between the three sidedress N rates tested in 2016. The lowest N rate resulted in the highest net return.

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