



# Influence of Seeding and Irrigation Rate on Corn Products

## Trial Objective

- Understanding how seeding rate influences product performance is essential to making the most of your seed investment.
- This study was designed to assess corn products across multiple seeding rates and irrigation environments to help growers select products and seeding rates for the irrigation environment on their farm. However, in 2018 timely rains minimized the demand for irrigation and there was only a one-inch difference between the two irrigation strategies. Therefore, data reported show product by seeding rate averaged across both irrigation strategies.

## Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Gothenburg, NE	Hord silt loam	Corn	Conventional	05/17/18	10/23/18	240	24K, 30K, 36K, 42K

- Nineteen corn products ranging from 105 to 115 RM were evaluated.
- The trial was a split-plot design with irrigation as the whole plot and corn product by seeding rate as the subplot. Treatment combinations were replicated twice.
- Two irrigation rates were included:
  - 100% full irrigation (FI) - 2 inches of water applied
  - 50% FI – 1 inch of water applied
- Watermark granular matrix sensors were installed to monitor soil moisture and determine irrigation timing.
- Weeds were managed uniformly. No fungicides or insecticides were applied.

## Understanding the Results

Table 1. Corn product yield was combined across the two irrigation environments of 50% and 100% FI.

Corn Product	Seeding Rates (seeds/acre)				AVG
	24K	30K	36K	42K	
	-----Average Yield (bu/acre)-----				
108RM-A	190	196	212	210	202
109RM	218	222	235	222	224
112RM-A	202	209	230	240	220
113RM-A	208	205	218	235	216
115RM-A	221	239	244	251	239
108RM-B	224	222	230	236	228
111RM	209	201	210	197	204
105RM	217	213	216	220	216
106RM	216	231	236	234	229
107RM	200	217	235	227	220
112RM-B	233	229	243	254	240
113RM-B	213	229	235	254	233
114RM-A	213	216	238	226	223
110RM-A	197	210	218	230	214
115RM-B	221	238	249	253	240
114RM-B	214	233	246	262	239
110RM-B	218	225	240	234	229
115RM-C	223	226	235	241	231
112RM-C	195	197	211	216	204
AVERAGE	212	219	230	234	224



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- On average, as the seeding rate increased, yield increased. While average yield increased by 4 bu/acre when increasing the seeding rate from 36,000 to 42,000 seeds/acre, the change was not as substantial as the 11 bu/acre difference between the 30,000 and 36,000 seeds/acre seeding rates.
- The 42,000 seeds/acre seeding rate produced the highest yields across all products, but the 36,000 seeds/acre seeding rate also performed well for many products.

## **What Does This Mean for Your Farm?**

- Producers always need to consider their irrigation and precipitation environment when making product and seeding rate decisions to achieve the best yield potential on that acre.
- Growers should consult their local seed sales team for information on how their branded products performed in this study.

## **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. Bayer and Bayer Cross Design are registered trademarks of Bayer Group. All other trademarks are the property of their respective owners. ©2018 Bayer Group, All Rights Reserved. 181203081833 121118CAM

