VRI – Corn Product Response to Irrigation and Population - Gothenburg, NE

TRIAL OVERVIEW

- With the increase in limited irrigation due to reductions in pumping capacity or restrictions on the amount of water producers are able to pump over a certain period of time, it is imperative that Monsanto tests products under varying irrigation rates to supply better corn product recommendations by irrigation level.

RESEARCH OBJECTIVE

- The objective of this study was to evaluate the effect of different seeding rates under full and limited irrigation on the yield of DEKALB® corn products.

Location	Soil	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield/Acre	Planting Rate/Acre
Gothenburg, NE	Hord silt loam	Corn	Conventional	05/07/2017	11/01/2017	240 bu/acre	24K, 30K, 36K, and 42K

SITE NOTES:

- Eleven DEKALB corn products were evaluated under two irrigation rates: 100% full irrigation (FI) to meet the evapotranspiration demands of the crop (totaling 6 inches) and 50% of FI (totaling 3 inches).
- Irrigation treatments were applied using a variable rate irrigation system.
- The study design was a split-split plot with irrigation as the whole plot, corn product as the first split, and planting density as the second split.

UNDERSTANDING THE RESULTS

DEKALB corn products	Seeding Rate (seeds/acre) 24K	30K	36K	42K	Average
	------- Average yield (bu/acre) -------				
DKC55-20RIB brand blend	**200**	**207**	**216**	**214**	**209**
100% FI	202	217	217	230	216
50% FI	196	187	214	182	195
DKC55-84RIB brand blend	**202**	**215**	**225**	**231**	**218**
100% FI	207	232	231	248	229
50% FI	198	197	219	214	207
DKC56-45RIB brand blend	**197**	**214**	**231**	**232**	**218**
50% FI	197	214	231	232	218
DKC58-06RIB brand blend	**209**	**240**	**232**	**225**	**226**
100% FI	217	247	239	253	239
50% FI	200	232	224	197	213
DKC60-67RIB brand blend	**205**	**227**	**233**	**235**	**225**
100% FI	208	228	235	242	228
50% FI	203	227	231	228	222
DKC60-87RIB brand blend	**194**	**206**	**209**	**209**	**204**
100% FI	196	209	198	212	204
50% FI	192	203	220	206	205
DKC62-52RIB brand blend	**205**	**220**	**230**	**214**	**217**
100% FI	218	234	249	229	232
50% FI	192	206	210	198	202
DKC63-55RIB brand blend	**187**	**204**	**199**	**194**	**196**
100% FI	179	213	211	199	200
50% FI	196	195	188	189	192
DKC63-60RIB brand blend	**207**	**223**	**208**	**223**	**215**
100% FI	219	246	233	263	240
50% FI	195	200	183	184	190
DKC63-21 brand	**210**	**220**	**240**	**219**	**222**
100% FI	207	212	230	216	216
50% FI	213	228	250	222	228
DKC64-34RIB brand blend	**220**	**234**	**244**	**249**	**237**
100% FI	237	260	253	268	255
50% FI	203	208	235	231	219

Table 1. DEKALB corn product performance influenced by seeding and irrigation rate

WHAT DOES THIS MEAN FOR YOUR FARM?

- Farmers should carefully consider corn product selection and seeding rate based on the irrigation capabilities in each field to help maximize their return.
- Monsanto intends to continue these trials for the 2018 season.