

Corn Hybrid Response to Seeding Rate in Northwestern MN

Locations: Crookston, MN (Polk Co.), East Grand Forks, MN (Polk Co.), Hendrum, MN (Norman Co.), Mahnomen, MN (Mahnomen Co.), and Newfolden, MN (Marshall Co.)

Plot Layout: Hybrid and seeding rate combinations replicated 4 times at each location

Objectives:

Evaluate corn response to seeding rate for three hybrids of differing comparative relative maturity (CRM).

Results:

Average corn grain yield ranged from 134 to 181 bu/acre among locations. Corn grain yield was affected by seeding rate at all locations. Seeding rates of 34,700 or higher produced the greatest yield at all locations.

Yield differed among hybrids at Crookston, East Grand Forks, and Mahnomen, MN. At each of these three locations, yield was greatest with the 86 CRM hybrid, intermediate with the 80 CRM hybrid, and least with the 74 CRM hybrid. Yield did not differ among hybrids at the two lowest yielding locations (Hendrum and Newfolden, MN).

Seeding rate	Crookston	East Grand Forks	Hendrum	Mahnomen	Newfolden
seeds/A	----- Yield (bu/A)† -----				
23,100	163 c‡	173 b	142 b	143 b	124 c
28,900	174 b	176 b	140 b	158 a	130 bc
34,700	178 ab	185 a	163 a	158 a	135 ab
40,500	182 a	185 a	157 a	161 a	143 a
46,300	175 ab	185 a	151 ab	151 a	136 ab

† Data averaged across three hybrids. At Crookston, data also are averaged across three planting dates.

‡ Within a given location, yield values followed by the same letter do not differ at the 10% probability level.

As expected, grain moisture at harvest was greatest with the 86 CRM hybrid and least with the 74 CRM hybrid at each location. Grain moisture did not differ between the 74 and 80 CRM hybrids at Hendrum, MN.

Hybrid	Comparative relative maturity	Crookston	East Grand Forks	Hendrum	Mahnomen	Newfolden
		----- Yield (bu/A)† -----				
P7443R	74	159 c‡	167 c	155 a	138 c	134 a
39V07	80	174 b	180 b	145 a	150 b	136 a
P8640AM	86	191 a	196 a	152 a	174 a	131 a
		-- Grain moisture at harvest (%)† --				
P7443R	74	20.8 c‡	14.0 c	18.4 b	16.3 c	21.9 c
39V07	80	24.9 b	16.8 b	19.3 b	17.3 b	25.0 b
P8640AM	86	31.1 a	19.6 a	24.7 a	22.4 a	32.3 a

† Data averaged across five seeding rates. At Crookston, data also are averaged across three planting dates.

‡ Within a given location, yield or grain moisture values followed by the same letter do not differ at the 10% probability level.

For Additional Information:
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Funding provided by the MN Corn Growers Association and DuPont Pioneer. Thanks to NDSU for planting the East Grand Forks, Hendrum, Mahnomen, and Newfolden locations. Thanks to the Northwest Research and Outreach Center for help with the research at Crookston.