

Corn Seeding Rate and Population Study — Grant County

Cooperator: Dan Roehl
 Nearest Town: Fergus Falls , MN
 Soil Type: Clay loam
 Tillage: Fall chisel + Spring field cultivator
 Previous Crop: Soybeans
 Planting Date: 5-14-13
 Variety: Various (6)
 Row Width: 30 inches
 Populations: (4) 30,000, 35,000, 40,000 and 45,000
 Fertilizer: 135# N, 40# P, 60# K, and 5# S
 Weed Management: Pre-plant 6 pt. Lumax; Post 5 oz Status + .75oz Steadfast.
 Harvest Date: 10-29-13; Circular harvest pattern using 1 row pull behind chopper into weigh hopper were quality samples were gathered once dumped.
 Experimental Design: Randomized Complete Block (4 replications); 4 row plots with harvesting two.

Purpose of Study:

Evaluate seeding rate performance of commercial corn hybrids in WC MN.

Results:

Yields are summarized by Seeding rate, hybrid across all populations (Table 1), and by hybrid and plant population (Table 2).

Table 1. Corn yield and harvest moisture by variety averaged over all plant populations.

Company Name	Brand Name	Maturity	Seed Rate Seeds/A	Moisture %	Yield @ 15% Bu/A
Channel	196-77STXRIB	96	Avg.†	16.7 ab‡	124 a
Croplan	2845SS/RIB	89	Avg.	15.3 cd	122 a
DEKALB	DKC48-12RIB	98	Avg.	16.3 bc	128 a
Mycogen Seeds	2H456	98	Avg.	17.0 ab	128 a
Pioneer	P8906AM1	89	Avg.	14.6 d	113 b
Syngenta	N36A-3220 E-Z Refuge	96	Avg.	16.2 bc	110 b
Thunder Seed	9595 VT3P RIB	95	Avg.	17.7 a	130 a
Wensman	W 90967STXRIB	96	Avg.	16.4 bc	126 a

Brand effect ($P > F$)	0.003	0.1030
Seeding rate effect ($P > F$)	0.204 (NS)§	0.748 (NS)
Brand x seeding rate effect ($P > F$)	0.231 (NS)	0.199 (NS)

† Data averaged across seeding rates since there was no statistically significant effect of seeding rate.

‡ Within a column, values followed by the same letter are not significantly different at the 10% probability level.

§ Non-significant at the 10% probability level.

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Table 2. Corn yield and harvest moisture for each variety determined by plant population.

Company Name	Brand Name	Maturity	Seed Rate Seeds/A	Moisture %	Yield @ 15% Bu/A
Channel	196-77STXRIB	96	30,000	17.5	144
Channel	196-77STXRIB	96	35,000	18.3	136
Channel	196-77STXRIB	96	40,000	17.4	116
Channel	196-77STXRIB	96	45,000	13.8	100
Croplan	2845SS/RIB	89	30,000	14.8	118
Croplan	2845SS/RIB	89	35,000	14.8	117
Croplan	2845SS/RIB	89	40,000	15.6	125
Croplan	2845SS/RIB	89	45,000	16.1	127
DEKALB	DKC48-12RIB	98	30,000	16.4	128
DEKALB	DKC48-12RIB	98	35,000	14.9	118
DEKALB	DKC48-12RIB	98	40,000	17.3	136
DEKALB	DKC48-12RIB	98	45,000	16.7	128
Mycogen Seeds	2H456	98	30,000	17.3	125
Mycogen Seeds	2H456	98	35,000	17.7	99
Mycogen Seeds	2H456	98	40,000	17.3	111
Mycogen Seeds	2H456	98	45,000	15.8	98
Pioneer	P8906AM1	89	30,000	12.3	84
Pioneer	P8906AM1	89	35,000	15.2	136
Pioneer	P8906AM1	89	40,000	15.7	115
Pioneer	P8906AM1	89	45,000	15.3	116
Syngenta	N36A-3220 E-Z Refuge	96	30,000	15.8	99
Syngenta	N36A-3220 E-Z Refuge	96	35,000	15.5	107
Syngenta	N36A-3220 E-Z Refuge	96	40,000	16.8	105
Syngenta	N36A-3220 E-Z Refuge	96	45,000	16.5	127
Thunder Seed	9595 VT3P RIB	95	30,000	17.7	125
Thunder Seed	9595 VT3P RIB	95	35,000	17.8	151
Thunder Seed	9595 VT3P RIB	95	40,000	18.7	127
Thunder Seed	9595 VT3P RIB	95	45,000	16.6	116
Wensman	W 90967STXRIB	96	30,000	16.7	136
Wensman	W 90967STXRIB	96	35,000	14.5	118
Wensman	W 90967STXRIB	96	40,000	17.0	136
Wensman	W 90967STXRIB	96	45,000	17.3	115