

# High vs. Low Plant Populations in Corn

Dale Rolofson

**OBJECTIVE:** To determine and document the profitability of high versus low planting populations in corn.

## HIGH POPULATION

## LOW POPULATION

### 1995

**Treatment:**

Plant population (seeds/acre): 24,500

**Treatment:**

Plant population (seeds/acre): 18,200

### 1996

**Entire** area planted to soybeans. No treatments were applied. Objective was to check residual effects of 1995 corn and to evaluate a yield monitor vs. weigh wagon.

### 1997

Plant population (seeds/acre): 30,000

### 1997

Plant population (seeds/acre): 21,000

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### Comparative cost (per acre)

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	<u>1995</u>		<u>1995</u>
Seed	\$26.57	Seed	\$18.34
	<u>1997</u>		<u>1997</u>
Seed	\$29.86	Seed	\$20.70

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<b>VARIABLE</b>	<b>1995 CORN</b>	<b>1996 SOYBEANS</b>	<b>1997 CORN</b>
Moisture (%)			
High Population	13.1 ***	9.7	13.7
Low Population	13.4	9.7	13.7
Test Weight (pounds/bushel)			
High Population	56.9 ***	N/A	58.7
Low Population	58.2	N/A	58.6
Yield (bushel/acre)			
High Population	126	53	<b>170**</b>
Low Population	133	53	163
Plants per acre			
High population	---	---	26,400
Low population	---	---	18,300

<b><u>1996</u></b>	<b>Scale</b>	<b><u>Monitor</u></b>
Yield	52.7	54.1 **

\*\* significantly different at 95% confidence level

\*\*\* significantly different at 99% confidence level

**Summary:** In 1995, both test weight and moisture were significantly different at the 99% confident level. The low population yield narrowly missed being significant at the 90% confidence level. In 1996, no residual effects were found. Yields measure by monitor were slightly higher than where weigh wagon was used. Grain yield was increased in 1997 by using the higher planting rate.