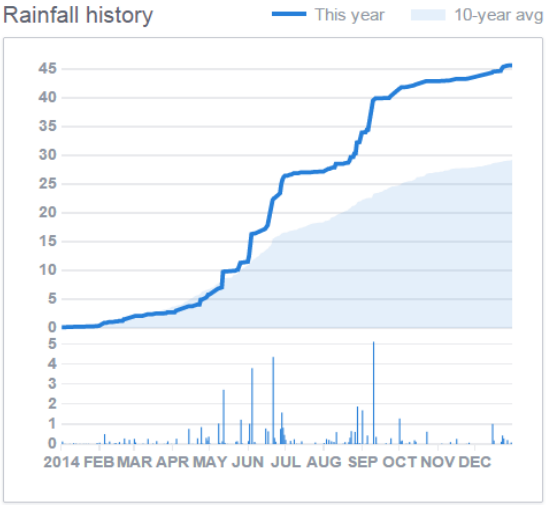
Nebraska On-Farm Research Network

Irrigated Corn Population Study: Seed Rate by Hybrid

Study ID: 004053201401
County: Dodge
Soil Type: Moody silty clay loam
Planting Date: 4/26/2014
Harvest Date: 10/30/2014
Row Spacing: 30”
Reps: 5
Previous Crop: Corn
Tillage: Minimum
Herbicides: Pre: 2 qt/ac Keystone LA on 4/22/14
Post: 22 oz/ac Roundup PowerMAX, 0.5 oz/ac Armezon, and 0.5 lb/ac Atrazine 4L on 6/2/14
Insecticides/Fungicides:
Poncho 500 seed treatment
6 oz/ac Capture LFR at planting
2.5 oz/ac Stratego YLD at V5 (6/2/14)
4 oz/ac Priaxor at V16 (7/3/14)
10 oz/ac Headline AMP at brown silk (8/5/14)
Irrigation: Pivot irrigated

Fertilizer:
110# 11-52-0 with 6# Zn, Fall 2013
3 gal 12-0-0-26, 20 gal/acre UAN 32% with 2 qt Keystone LA on 4/22/14
5 gal/acre 10-34-0 at planting
40 gal/acre UAN 32% side-dress mid-June



Introduction: Seed companies conduct product development research on plant population response for future hybrid releases to help make hybrid specific plant population recommendations for producers. Utilizing company information to adjust seeding rates higher or lower than your average seeding rate could be an agronomic and economic benefit. In this study, two 113-114 day hybrids with differing responses for plant population were selected. Hybrid 8389 is characterized as a hybrid with ability to perform well at lower to moderate populations while 8331 has shown to perform well at higher populations. The purpose of this study was to assess the corn plant population by hybrid interaction.

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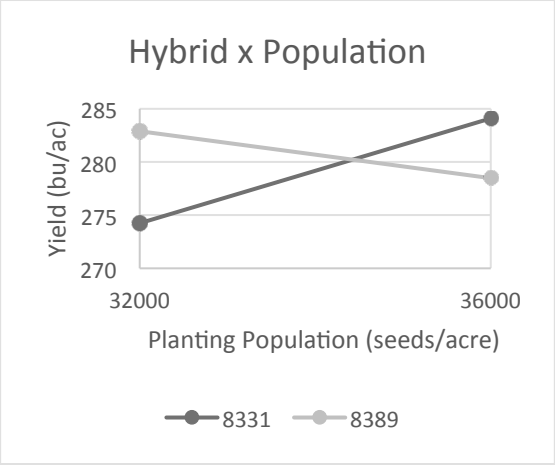
Results: There is a hybrid by population interaction so the two factors are analyzed together.

	Yield† (bu/acre)	Net Return ‡
H 8389 + 32,000 seeds/acre	283 AB*	$880.50
H 8331 + 32,000 seeds/acre	274 B	$849.00
H 8331 + 36,000 seeds/acre	284 A	$870.25
H 8389 + 36,000 seeds/acre	278 AB	$849.25
P-Value	*0.0922*	--

†Bushels per acre corrected to 15.5% moisture.

*Values with the same letter are not significantly different at a 90% confidence level.

‡Net return based on $3.50/bu corn and $275/bag seed.



Summary: For hybrid H 8331, increasing seeding rate from 32,000 to 36,000 seeds/acre resulted in a significant yield increase. For hybrid H 8389 there was no yield difference between the 32,000 and 36,000 seeding rates. At a given population level there was no significant yield difference between the two hybrids.

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