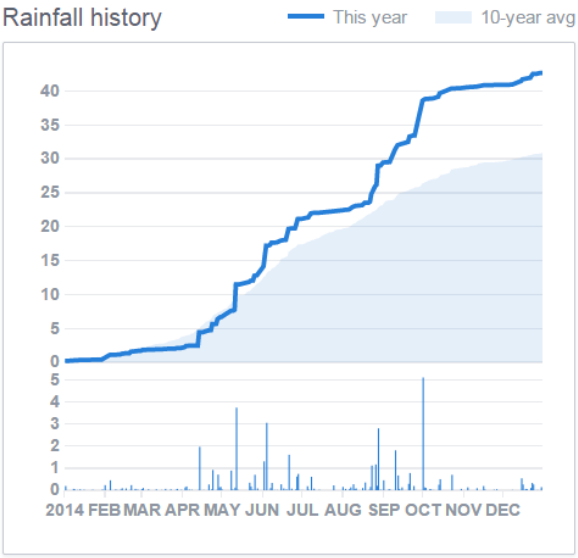
Nebraska On-Farm Research Network

Rainfed Corn Population Study

Study ID: 028109201401
County: Lancaster
Soil Type: Kennebec silt loam, Wabash silty clay
Planting Date: 4/22/2014
Harvest Date: 11/8/2014
Row Spacing: 20”
Hybrid: DKC 64-87 RIB
Reps: 4
Previous Crop: Soybeans
Tillage: No-till
Herbicides: **Pre:** Corvus, Atrazine 4L, 2,4-D LV6
Post: Laudis and Roundup PowerMAX
Insecticides/Fungicides:
6 oz/ac Capture LFR (4 oz/ac in furrow, 2 oz/ac with pre-emerge herbicide
Fertilizer:
175#N/acre as anhydrous ammonia in fall 2013
150# 10-34-0 in winter
5.625 gal/ac 10-34-0 as starter
0.375 gal/ac Zinc chelate (Zn-EDTA) as starter



Introduction: Industry has been encouraging growers to increase their corn plant populations. Subsequently, more and more are growers are asking the question “What is the most profitable planting rate for corn?” The purpose of this study was to determine of the four planting rates selected, which was the most profitable. The populations chosen in this study represent a range often used by many growers in Eastern Nebraska.

Sponsored by:

In partnership with:

Nebraska On-Farm Research Network

Results:

	Yield† (bu/acre)	Moisture (%)	Net Return ‡
28,000 seeds/ac	224 C*	15.2 A	$692.61
32,000 seeds/ac	234 B	15.0 A	$714.56
36,000 seeds/ac	244 A	14.9 A	$736.50
40,000 seeds/ac	245 A	15.0 A	$726.94
P-Value	*<0.0001*	*0.3717*	--

†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 price and $261.11/bag of 80,000 seeds.

Summary: The highest yielding populations were 36,000 and 40,000. These populations were statistically higher than planting 28,000 or 32,000 seeds/acre. No increase in yield was seen by increasing seeding rate from 36,000 to 40,000 seed/acre. The greatest net return was for 36,000 seeds/acre.

Sponsored by: University of Nebraska Lincoln

In partnership with: Soybeans Nebraska Soybean Board; Nebraska Corn Board; Nebraska Corn Growers Association