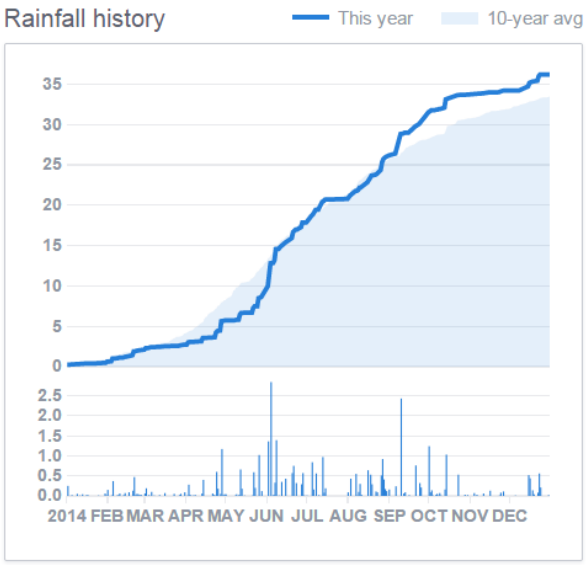
Nebraska On-Farm Research Network

Rainfed Corn Population Study

Study ID: 027025201401
County: Cass
Soil Type: Albaton silty clay, Moville & Nodaway silt loam
Planting Date: 4/1/2014
Harvest Date: 10/27/2014
Row Spacing: 30”
Hybrid: DKC 67-57 RIB
Reps: 6
Previous Crop: Soybean
Tillage: No-till
Herbicides:
Pre: 2.5 qt/ac Degree Xtra on 3/15/14
Post: 32 oz/ac Roundup WeatherMAX on 5/25/14
Insecticides/Fungicides:
3.4 oz/ac Capture LFR and 3 oz/ac Headline EC in furrow
12 oz/ac Quilt Xcel on 6/23/14
3 oz/ac Headline EC on 8/3/14
Fertilizer:
5 gal/ac Optistart Pro 9-18-6-2S-0.5Zn-Mn with Avail at planting
180# actual N/ac as UAN with herbicide
9.5# actual N/ac and 45# actual P/ac as 11-52-0 plus 15# S/ac and 0.5# Zn/ac



Introduction: This is a continuation study which was started during the 2010 growing season. The purpose of this study was to determine the corn plant population which was the most profitable. The populations chosen to be evaluated this year and in previous years were determined by the grower. The field associated with this study is sub-irrigated.

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Results:

	Yield† (bu/acre)	Moisture (%)	Harvest Pop (plants/acre)	Net Return ‡
28,000 seeds/ac	309 B*	14.2 A	27,083 D	$987.43
32,000 seeds/ac	322 A	14.3 A	30,833 C	$1019.49
36,000 seeds/ac	321 A	14.3 A	35,000 B	$1002.55
40,000 seeds/ac	322 A	14.3 A	38,583 A	$992.61
P-Value	*0.0078*	*0.1542*	*<0.0001*	--

†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 $268.78/bag of 80,000 seeds.

Summary: Yield was significantly increased by increasing the seeding rate from 28,000 to 32,000 seeds/ac. No yield increase was seen for increasing plant populations above 32,000 seed/ac. The seeding rate with the highest net return was 32,000 seeds/ac.

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