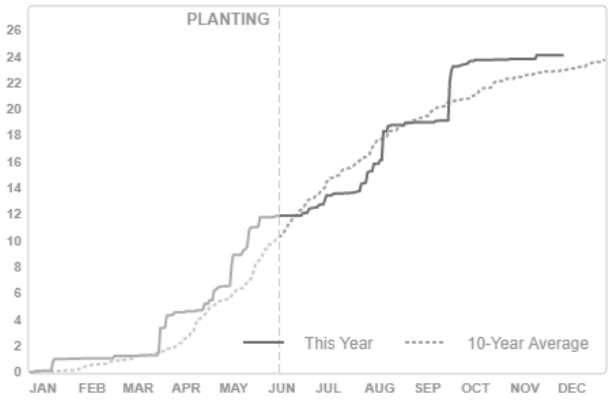
15" vs 30" Row Spacing for Dry Beans

Study ID: 190087201701
County: Hitchcock
Soil Type: Blackwood loam 0-1% slope
Planting Date: 6/8/17
Harvest Date: 9/10/17
Variety: Torreon
Reps: 4
Previous Crop: Popcorn
Tillage: Chisel in March, disked twice in June
Herbicides: ***Pre:*** Prowl® and Outlook® on 6/11/17
Post: Raptor® and Basagran® on 7/10, 3.5 pt/ac Eptam® on 8/1
Seed Treatment: Cruiser® 250
Foliar Fungicides: 5 oz/ac Sanidate on 8/10 and 8/25
Fertilizer: 10 gal/ac of 10-34-0 sprinkled on top of seed furrow at planting; 30 lb/ac N using 32% urea in mid-July

Irrigation: Pivot, Total: 5" at rates of 0.4" to 0.6" per application
Rainfall (in):



Introduction: The purpose of this study was to evaluate dry beans planted in 15" versus 30" row spacing. The 15" row spacing was planted at 120,000 seeds/ac, and the 30" row spacing was planted at 100,000 seeds/ac. The 30" row spacing was cultivated on July 27. The study was harvested using the traditional method of cutting and windrowing followed by combining.

Results:

	Yield (bu/acre)†	Marginal Net Return‡ ($/ac)
15"	40 B*	513.16 B
30"	47 A	602.24 A
P-Value	0.031	0.033

*Values with the same letter are not significantly different at a 90% confidence level.
†Bushels per acre corrected to 14% moisture.
‡Marginal net return based on $24/cwt ($14.40/bu at 60 lb/bu), $65/ac seed cost for the 15" row spacing treatment with 120,000 seeds/ac, $52/ac seed cost for the 30" row spacing treatment with 100,000 seeds/ac, and $15/ac for cultivation on the 30" treatment only.

Summary: The 30" row spacing treatment with 100,000 seeds/ac resulted in higher yields and higher net return compared with the 15" row spacing treatment. White mold was present in both treatments. Mold pressure was observed to be lower in the 30" row spacing treatment – around 50 percent in the 15" treatment compared with 5 percent in the 30" treatment. Hail on August 5 caused around 50 percent harvest loss in both treatments.

Sponsored by: University of Nebraska Lincoln; Nebraska Corn Board; Nebraska Soybean Checkoff

In Partnership with: Nebraska Corn Growers Association; Nebraska Dry Bean Commission