

FIELD EXPERIMENT HISTORY

Year: 1995

Title: Row Spacing by Plant Population by Hybrid
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Location: Lancaster Agricultural Research Station, Lancaster, WI

FIELD INFORMATION

Soil Type: Fayette Silt Loam

Soil Test Results: Date: Oct. 1994 pH:7.1 P(ppm):31 K(ppm):190 O.M.(%):3.1

Fertilizer Applied: 180 lbs/a N Analysis: 82-0-0 Time: preplant
140 lbs/a total Analysis: 8-32-17 Time: planting

Tillage Operations: Fall Chisel Plow, Spring Soil Finisher

Previous Crop: corn

EXPERIMENTAL PROCEDURE

Exp. Design: RCB Split-Split plot

Replicates: 4

Variables: 2 Row Spacings and 2 Plant Populations and 3 Hybrids

Plot Size: Planted: 10' (4 rows) by 40' for 30" row spacing
12.67' (4 rows) by 40' for 38" row spacing
Harvested: 2 rows by 37.5'
Row Spacing: 30" and 38"

Hybrids: Cenex/LOL 544
Cenex/LOL 555
Pioneer 3417

Planting: Date: May 12
Equipment: 30" row spacing: 4-row John Deere 7000
Equipment: 38" row spacing: 4-row Case-IH Air Planter
Seeding Rate: 40,000 plants/A

Harvesting: Date: Oct. 14
Equipment: Gleaner KKS Plot Combine

	<u>Material</u>	<u>Rate</u>	<u>Method</u>
Weed Control:	Roundup	2 qts/a	preemerg
	Dual II	2 pts/a	preemerg
	Bladex	2 qts/a	preemerg
	Rotary Hoe		5/25
	Cultivate		6/21

Insecticide: Lorsban 8.7 lbs/a planting

Results: Table E-24.

**Table E-24. Row Spacing by Plant Population by Hybrid.
Lancaster, WI 1995.**

Row Spacing inches	Plant Population plants/a	Hybrid	Broken Stalks %	Moist %	Yield bu/a
30			11.0	20.2	136.1
38			8.4	20.5	120.6
	24,000		9.6	20.3	121.7
	30,000		9.8	20.4	135.1
30	24,000		11.1	20.2	126.8
38	24,000		8.2	20.4	116.6
30	30,000		11.0	20.2	145.5
38	30,000		8.6	20.5	124.7
		Cenex 544	9.3	19.7	131.6
		Cenex 555	10.2	20.4	117.3
		Pioneer 3417	9.7	20.9	136.3
30		Cenex 544	9.6	19.4	141.7
38		Cenex 544	9.0	20.0	121.5
30		Cenex 555	11.4	20.4	129.2
38		Cenex 555	9.0	20.5	105.3
30		Pioneer 3417	12.1	20.8	137.5
38		Pioneer 3417	7.3	21.0	135.1
	24,000	Cenex 544	8.8	19.8	123.7
	30,000	Cenex 544	9.7	19.6	139.5
	24,000	Cenex 555	10.7	20.4	110.3
	30,000	Cenex 555	9.8	20.5	124.2
	24,000	Pioneer 3417	9.4	20.8	131.0
	30,000	Pioneer 3417	10.0	21.1	141.6
30	24,000	Cenex 544	7.7	19.5	130.7
38	24,000	Cenex 544	10.0	20.1	116.8
30	30,000	Cenex 544	11.5	19.4	152.8
38	30,000	Cenex 544	7.9	19.9	126.2
30	24,000	Cenex 555	12.5	20.5	123.3
38	24,000	Cenex 555	8.8	20.4	97.4
30	30,000	Cenex 555	10.4	20.4	135.2
38	30,000	Cenex 555	9.1	20.6	113.2
30	24,000	Pioneer 3417	13.0	20.7	126.4
38	24,000	Pioneer 3417	5.8	20.8	135.6
30	30,000	Pioneer 3417	11.2	20.9	148.6
38	30,000	Pioneer 3417	8.8	21.2	134.6
Mean			9.7	20.3	128.4
Probability					
Row Spacing (RS)			17.6	47.9	1.7
Plant Population (PP)			> 50	> 50	4.0
RS x PP			> 50	49.4	33.8
Hybrid (H)			> 50	< 0.1	0.1
RS x H			45.0	11.3	6.1
PP x H			> 50	10.6	> 50
RS x PP x H			23.0	> 50	34.6
LSD (0.10)					
Row Spacing (RS)			NS	NS	7.6
Plant Population (PP)			NS	NS	10.0
Hybrid (H)			NS	0.2	7.8
CV %			46.6	1.5	10.1