



HIGHER POPULATION OR ROW SPACING?

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As corn yields continue to increase, there's interest in whether row spacing can be reduced to push yields to the next level. We reported 8% higher yields for 20 inch spaced rows compared with 30 inch rows from a three year, three location study conducted in the early '90's. And plant population studied during that same time showed optimum populations to be 30000 plants per acre. Current row spacing and population studies include 20 and 30 inch spaced rows with populations ranging from 16000 to 36000 plants per acre.

The row spacing results are given in Table 1. At Waseca, corn yields were consistently higher each year for 20 compared with 30 inch rows. The average over years was 12 bu/a. But, at Lamberton the reverse was the case; 30 inch rows yielded 11 bushels higher such that the six year location average shows yields not different for the two row spacings.

There was a different response to plant population. At both locations corn yields continued to increase as population increased up to 36000 plants per acre. The response to increasing populations was consistent at both locations and for each of the three years of the study (Table 2). Yields were significantly higher at 36000 plants per acre compared with 32000 plants per acre, which is close to our current population recommendations.

The results of these current population and row spacing studies suggest that growers should consider higher plant populations before row spacing changes.

Table 1. Effect of row spacing on corn yields at the Southern and Southwest Research and Outreach Centers.

Row Spacing (inches)	Waseca				6 Year-Loc Average
	2004	2005	2006	Average	
	Grain Yield (Bu/A)				
30	183	191	188	187	182
20	194	201	201	199	
	Lamberton				182
	2004	2005	2006	Average	
	Grain Yield (Bu/A)				
30	170	187	165	177	182
20	159	177	162	166	

Table 2. Effect of plant population on corn yields at the Southern and Southwest Research and Outreach Centers, 2004-2006.

Plant Population (Plts/A)	Waseca	Lamberton	6 Year-Loc Average
	Grain Yield (Bu/A)		
16000	159	144	152
20000	181	160	171
24000	189	170	180
28000	197	179	187
32000	206	184	195
36000	225	191	208

