

# Soil Temperature Effects on No-Till Corn Emergence and Yield in Wheat Residue

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## Objective

To assess the influence of soil temperature on corn emergence and yield in wheat stubble.

## Background

Crop Year:	1997	Soil Test:	pH 6.4; P 44 lbs./A;
Cooperator:	Larry Lotz		K 298 lbs./A
County/Town:	Fayette/ Washington C.H.	Fertilizer Applied:	220-46-120
Drainage:	Improved- 60 ft.	Herbicide:	1 qt. Roundup; 1 pt. 2,4-D burn.
Major Soil Type:	Crosby		Basis Gold
Previous Crop:	Wheat	Variety:	DeKalb 604
Tillage:	None		

## Materials and Methods

Plots were established at three planting dates to determine the influence of soil temperature under wheat residue on the emergence of corn. Minimum and maximum soil temperatures were determined by averaging the daily soil temperatures from date of planting until emergence. Individual plot size was 30' x 160' with two replications.

## Results

Planting Date	Emergence	Min. Soil Temp.	Max. Soil Temp.	Planted Population	Harvest Population	Harvest Moisture (%)	Yield (bu/A)
April 21	May 8	47.8	58.8	31,800	27,500	18.2	182
May 2	May 17	48.8	60.7	31,800	28,000	20.4	173
May 21	May 29	53.1	69.6	31,800	28,750	21.5	184

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