

Sub-Surface Drip Tape Irrigation Study

CORN

PURPOSE:

To evaluate the return on investment when using sub-surface drip tape irrigation

Treatment	Final Stand Count	Percent Moisture	Test Weight	BU. / A.	BU. / A. Difference	ROI
Water Only	34,500	19.8	55.2	222.6	+ 10.4	+ \$33.71
Control: No Water	32,500	20.5	55	212.2	--	--
High Management	34,000	20.2	55.1	245.8	+ 33.6	+ \$66.41

ROI does NOT include cost of Drip Tape, Water Source, or installation of system

Additional cost of High Management (injected products): \$32.00/A. Restore - IPE (N,P,K irrigation product) \$15.75/A.

OBSERVATION:

We used the Sub-Surface Drip Tape system to apply water only to the water only zone, and water and nutrients to the High Management zone. Total amount of water applied to the zones was 4.5 inches of rain equivalent. 1 inch was applied after planting to saturate the seed zone, establishing a quick emergence. Second application of 1 inch at V4 carrying 45 units Nitrogen. Third application of 1/2 inch at V8 carrying 45 units of Nitrogen. Fourth application of 1/2 inch at VT carrying 45 units of Nitrogen and 2.5 gallons of IPE 3-15-0. The final application of 1.5 inches was made at R2. Total amount of Nitrogen in the High Management Zone equals that applied in the other 2 zones, just applied through the drip tape.

2 Year Average ROI

Water Only	High Management
+ \$18.01	+ \$125.36

Location	New Ulm
Planting Date	5/16/2017
Harvest Date	10/21/2017
Hybrid	5113 AMXT
Population	37,500
Row Width	30
Previous Crop	Soybean
Tillage	NO- Till
Herbicides	16 oz. Diflexx, 28 oz. Glyphosate

Soil Type	Silty Clay Loam			
Soil Test Values	pH	%O.M.	CEC	
	6.3	5.4	17.3	
% Base Saturation	%Ca	%Mg	%K	%H
	68.1	25.8	2.1	4
Parts Per Million	P	K	S	Zn
	28	140.7	1.6	1.3

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