



40161 Highway 59 Yuma, CO 80759

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2017

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## IRRIGATED CORN TRIALS

**FIELD:** Newbanks SE

**FARMREIGN PRECISION PLANTER PLANTING DATE:** 5/4/2017

**POPULATION:** 34K

**HARVEST DATE:** 11/11/2017

**VARIETY:** G10C45-5122

**DMI STRIP-TILL:**

**APPLICATION DATE**

(Analysis) 9.6 - 17 - 3s applied 10 gal./ac. @ 4" and 13 gal./ac. @ 10" 4/6/2017

**2x2 STARTER FERTILIZER:**

(Analysis) 16 - 9 - 0 - 3 s - .1 Zn @ 18 gal./ac. 5/4/2017

**THROUGH REINKE SPRINKLER:**

**PROTOCOL APPLICATION** @ 1 qt./ac. + 28 - 0 - 0 - 5 @ 6 gal./ac. 5/31/2017

28 - 0 - 0 - 5 @ 4 gal./ac. 6/14/2017

28 - 0 - 0 - 5 @ 4.4 gal./ac. 6/19/2017

28 - 0 - 0 - 5 @ 3 gal./ac. 6/21/2017

28 - 0 - 0 - 5 @ 3 gal./ac. 6/23/2017

28 - 0 - 0 - 5 @ 3 gal./ac. 6/25/2017

**PROTOCOL APPLICATION** @ 1 pt./ac. 6/28/2017

28 - 0 - 0 - 5 @ 4 gal./ac. 6/30/2017

28 - 0 - 0 - 5 @ 4 gal./ac. 7/4/2017

28 - 0 - 0 - 5 @ 4.5 gal./ac. 7/6/2017

28 - 0 - 0 - 5 @ 5 gal./ac. 7/9/2017

28 - 0 - 0 - 5 @ 5.5 gal./ac. 7/11/2017

28 - 0 - 0 - 5 @ 6 gal./ac. 7/13/2017

28 - 0 - 0 - 5 @ 6.75 gal./ac. 7/15/2017

28 - 0 - 0 - 5 @ 3 gal./ac. 7/18/2017

**PROTOCOL APPLICATION** @ 1 pt./ac. 7/27/2017

OBERON @ 5 oz./ac. (Miticide Application) 7/28/2017

**PROTOCOL APPLICATION** @ 1 pt./ac. 8/25/2017

**RAINFALL:** 14.44 inches

**RAINFALL by Month:**

May = 2.22", June = 2.74", July = 4.3", August = 2.58", September = 2.07", October = .53"

**GROUND SPRAY APPLICATIONS:**

ACURON @ 1.26 qt./ac. + RT3 @ 32 oz./ac. +  
WHEELHOUSE @ .60 qt./ac. + INTERLOCK @ 2 oz./ac. 5/17/2017

HALEX @ 4 pt./ac. + WHEELHOUSE @ .72 qt./ac. +  
INTERLOCK @ 2 oz./ac. 6/12/2017

# PX153

IRRIGATION SOIL SURFACTANT  
INJECTED THROUGH THE PIVOT

on 5/31/2017, 6/28/2017, 7/27/2017 & 8/25/2017

# CONTROL


STANDARD IRF PROGRAM

APPLIED WATER: 13.23 inches		APPLIED WATER: 13.23 inches		APPLIED WATER: 16.54 inches	
80% ET - Probe 4		80% ET - Probe 6		100% ET - Probe 5	
INDIVIDUAL REPS		INDIVIDUAL REPS		INDIVIDUAL REPS	
MOISTURE	BUSHEL PER ACRE	MOISTURE	BUSHEL PER ACRE	MOISTURE	BUSHEL PER ACRE
15.2	246.9	15.6	252.7	17.0	257.8
15.8	261.7	15.8	246.9	17.8	241.1
15.8	263.8	15.9	254.1	17.9	251.8
16.6	268.0	16.5	259.5	18.2	254.6
16.2	265.6	16.6	259.5	17.7	248.5
16.1	260.3	16.8	262.7	17.6	245.1
16.2	264.2	17.0	258.2	17.3	249.5
16.6	266.1	17.8	244.7	17.2	245.0
16.1	260.2	17.2	252.1	17.2	256.3
16.0	261.1	17.3	247.1	17.3	252.9
16.0	257.1	17.4	245.5	17.5	254.8
15.9	248.4	15.7	247.5	17.4	248.4
15.6	255.8	15.5	236.7	17.3	257.3
15.3	250.9	15.5	234.1	17.2	257.2
15.0	257.3	15.6	231.0	17.0	254.7
14.9	242.2	16.5	231.6	17.1	258.7
14.6	185.2	15.8	239.3	17.2	258.1
END OF DATA		15.8	221.1	17.9	259.9
		16.3	169.7	17.9	257.0
		16.4	164.5	17.9	259.3
		15.5	207.1	17.8	267.2
REP AVERAGE		REP AVERAGE		REP AVERAGE	
15.8	253.8	16.3	236.5	17.5	254.1

Weather, daytime temperatures and other factors affect data results, as in any year. The Irrigation Research Foundation strives to record and control these factors where possible. Not all of these factors are measurable or recognized.

For weather information please go to [www.coagmet.com](http://www.coagmet.com), monthly summaries, select the month, year and the Yuma station.

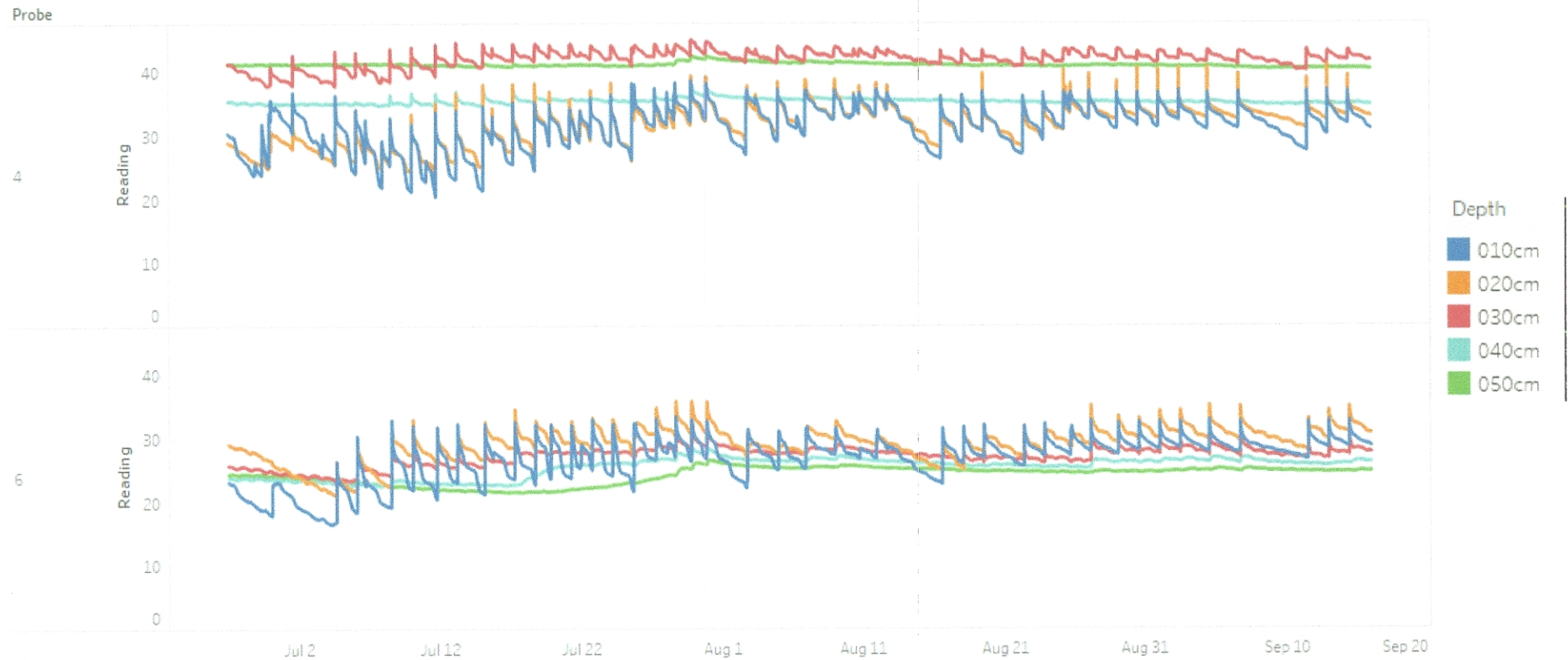
**CONTINUE TO NEXT PAGE TO VIEW ADDITIONAL TRIAL RESULTS FROM AGRIMEASURES, LLC** 



Zone Pivot Irrigation  
Corn Trial –  
Charles Corey, IRF,  
Yuma, CO

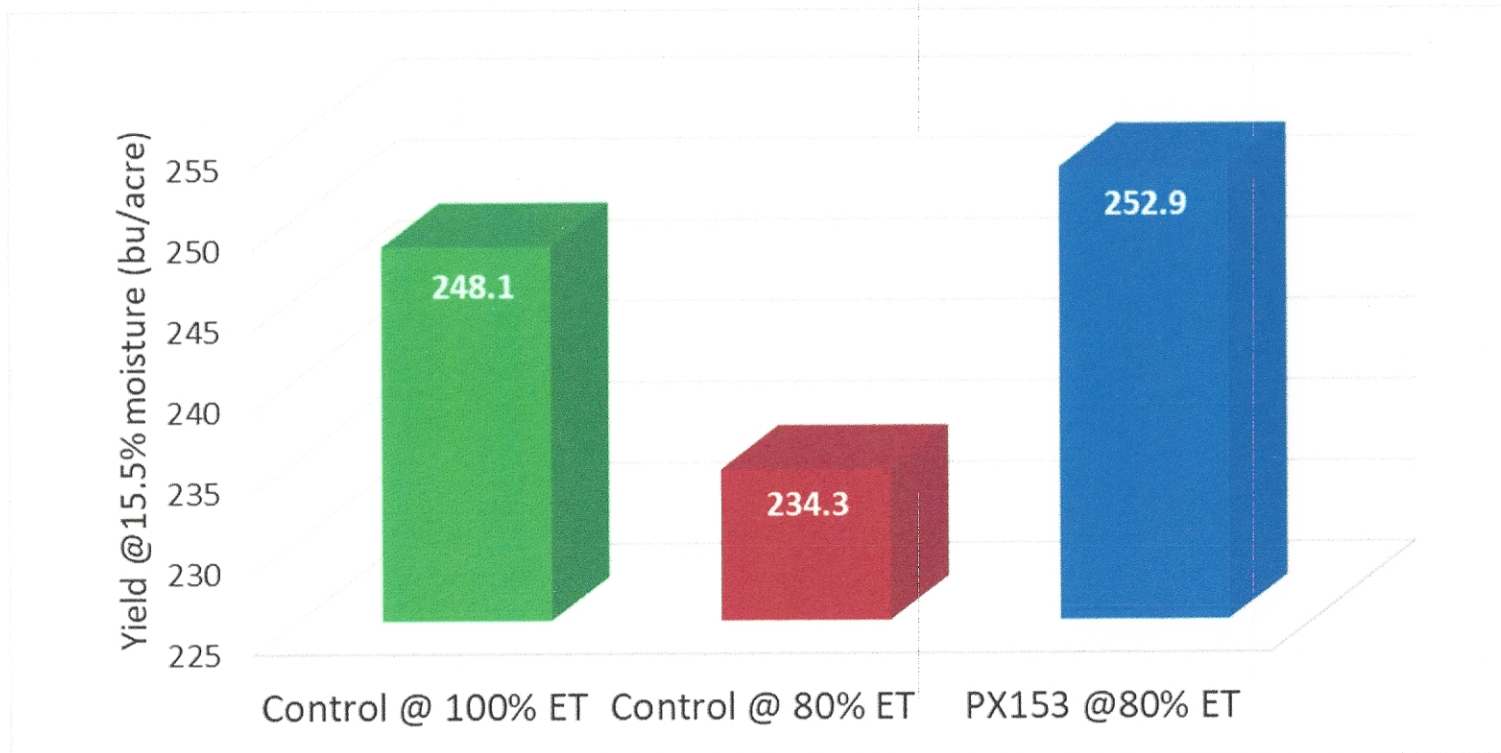
# In-Season Soil Moisture Benefit

## Volumetric Moisture Content



Probe 4 = PX153 @ 80% ET  
Probe 6 = Control @ 80% ET

# Yield Response



## Irrigation:

Control @ 100% ET - 16.54"

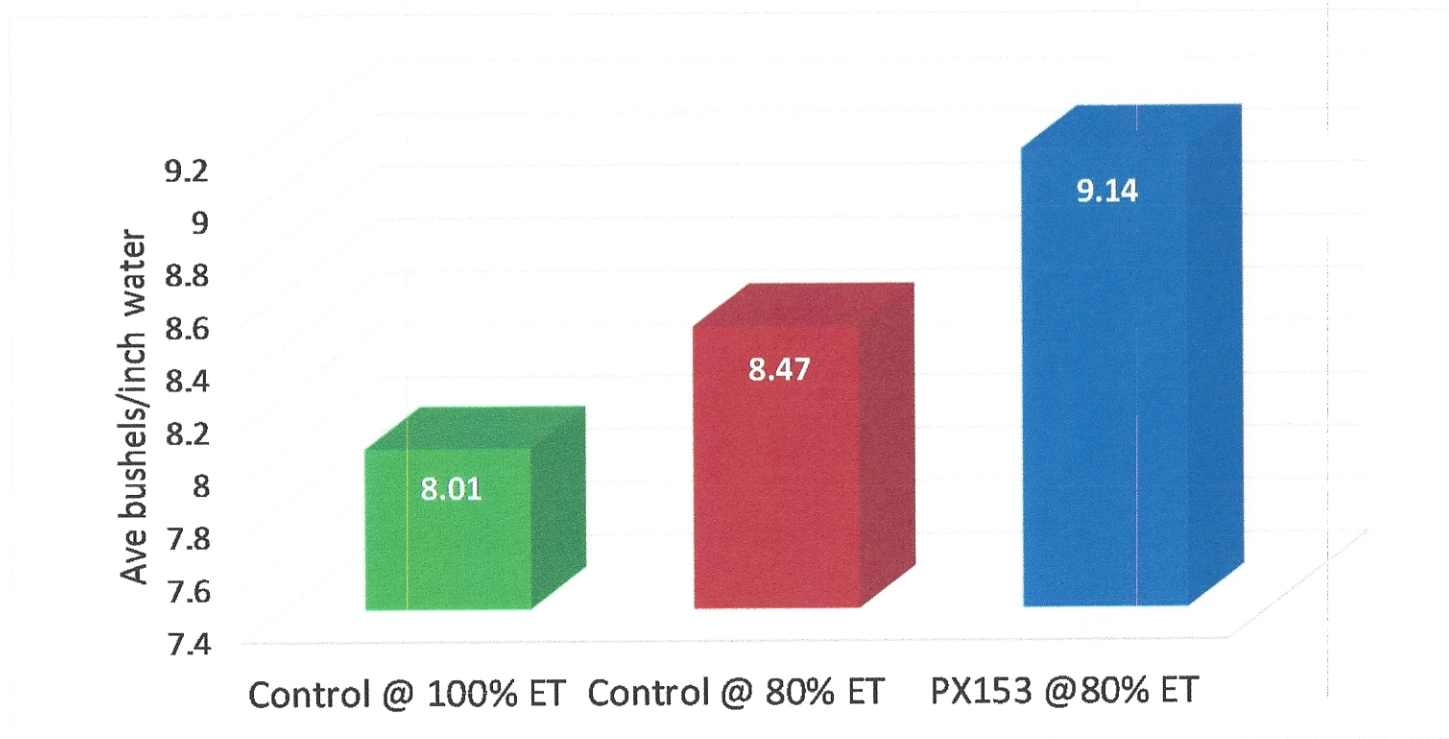
Control @ 80% ET - 13.23"

PX153 @ 80% ET - 13.23"

Energy cost: \$213.16/acre inch of applied water

Reduced energy cost @ 80% ET - \$705.56

# Water Use Efficiency

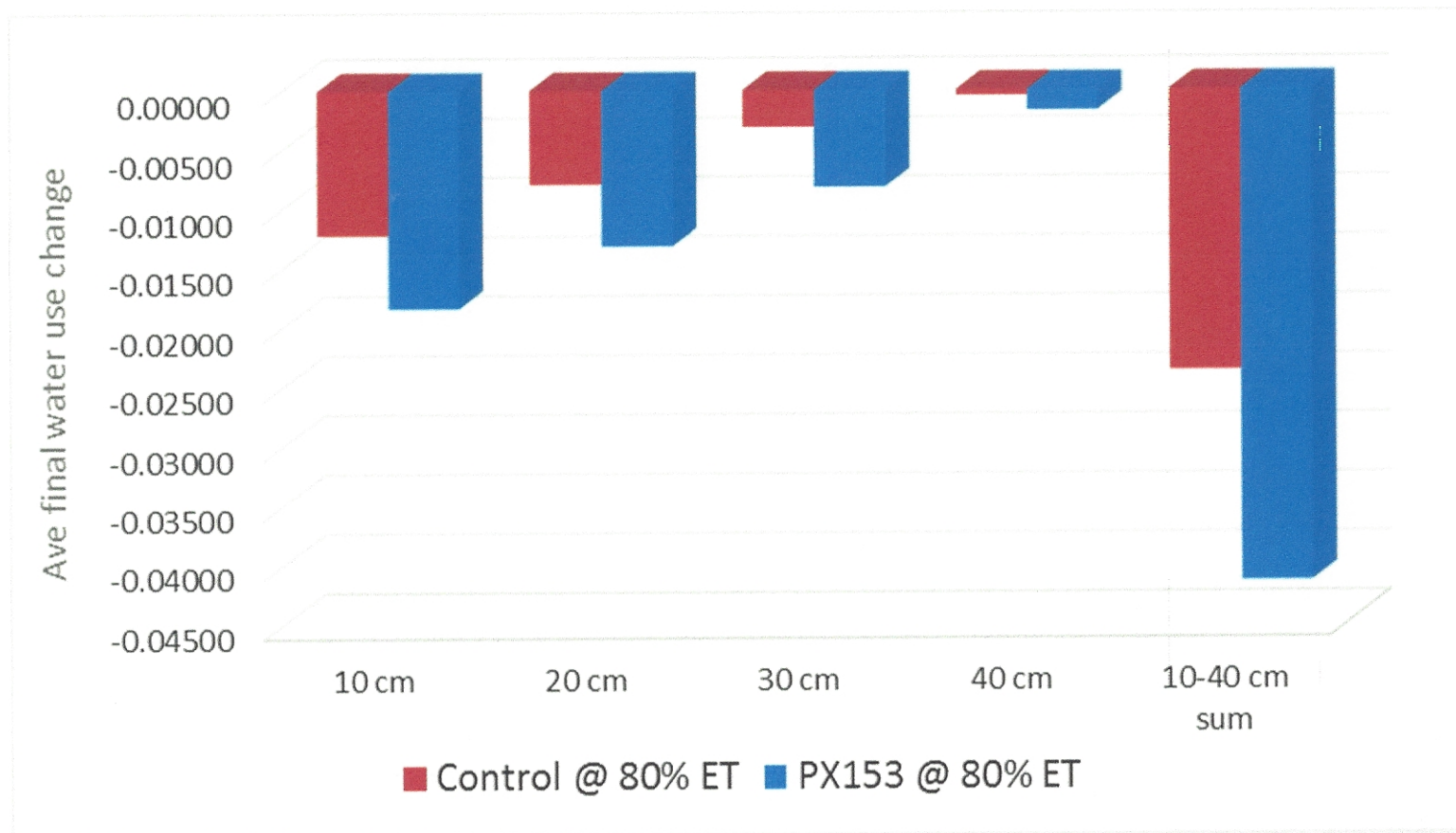


Rainfall/irrigation total:

80% ET - 27.67"

100% ET - 30.98"

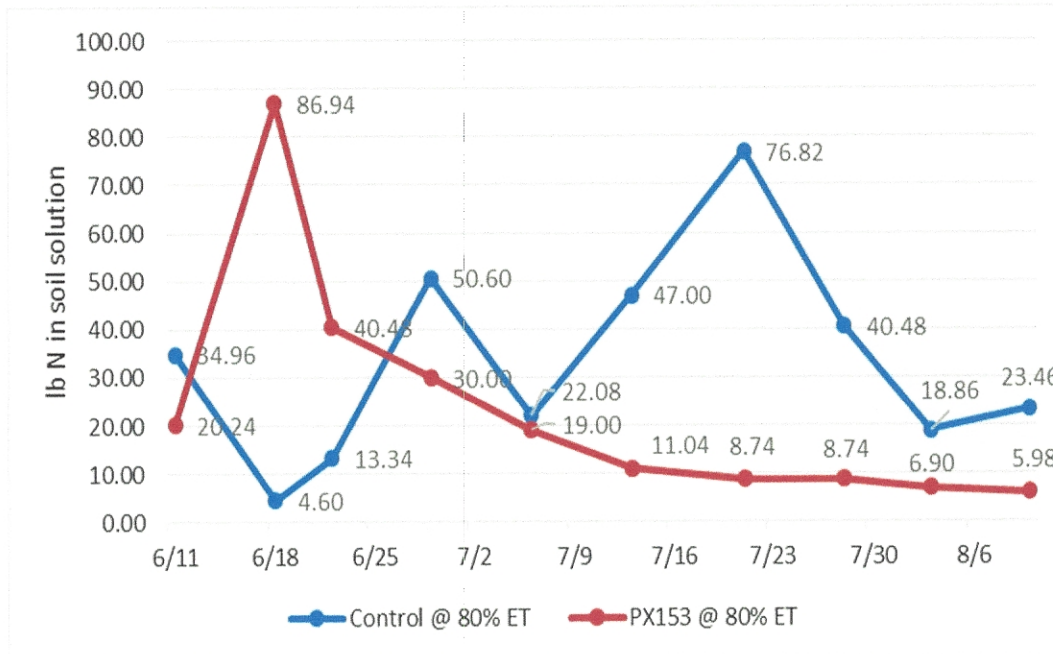
# Season-long Root Soil Moisture Uptake\*



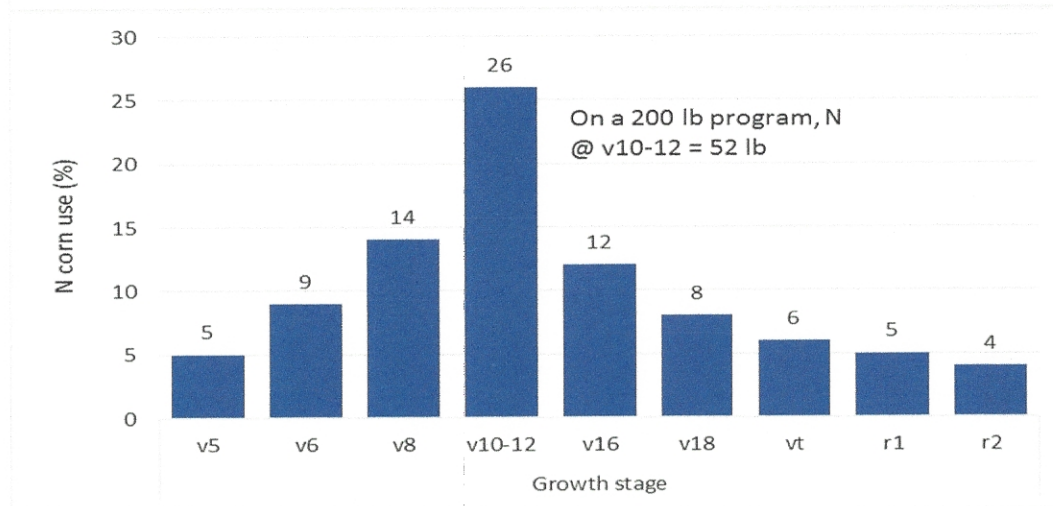
Soil moisture uptake at 10-40 cm depth increased by 75.3% with PX153 compared to the control

\*Data reflects the difference in amount of water extracted from the soil solution by the corn roots during the course of plant development

# Soil Solution Nitrate vs Model Crop Need



Initial PX153 application @ 1 qt/acre and foliar fertilizer (28-0-0-5) application @ 6 gal/acre on 5/31



Peak nitrate in soil solution with PX153 timed with need by corn crop