

Irrigation Scheduling using soil moisture sensors



TJ Knecht, LoPresti Farms, Pueblo, CO



10:59

69%

←

Last Updated: 10:45 AM

⋮

LoPresti Farms - 40th Lane

Avondale,CO,USA

57 °F

Today Hi/Lo Temp
Hi: 58 °F @ 10:30 AM
Lo: 54 °F @ 9:45 AM

Feels Like 61 °F



This morning: Sunny

Hum
33 %

24 HR
0.02 in

Pressure
30.09 inHg

ESE
12 mph

Solar
791 W/m²

Sunrise
6:02 AM

Sunset
7:48 PM

Forecast

7-day

Hourly

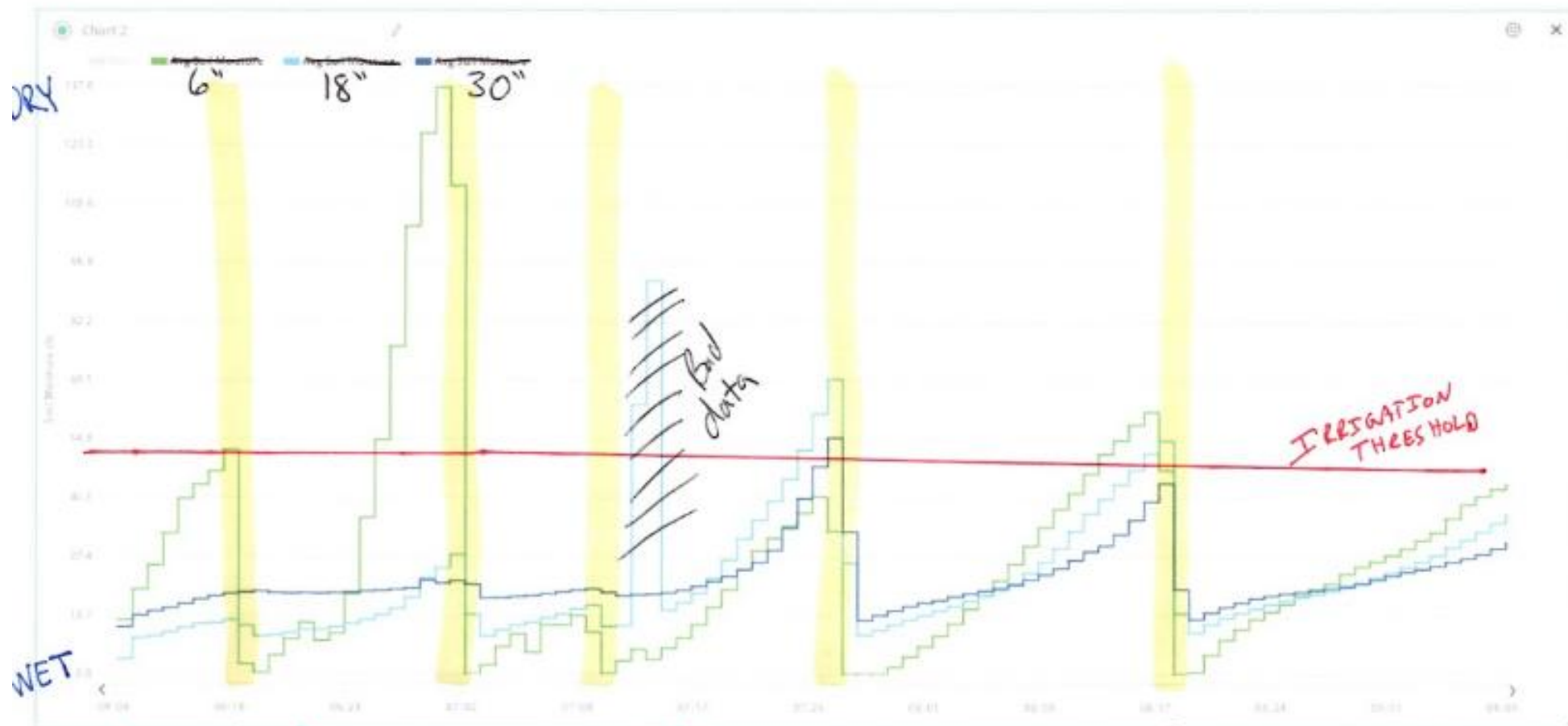
Sunday
04/30

Monday
05/01

Tuesday
05/02







↑ IRR before sensors installed 5" H₂O

Roots using water @ 6"

↑ IRR 5" H₂O

Roots using water @ 18"

↑ IRR 5" H₂O

↑ IRR 4" H₂O

Roots using water @ 30"

↑ IRR 7" H₂O

↑ IRR 7" H₂O

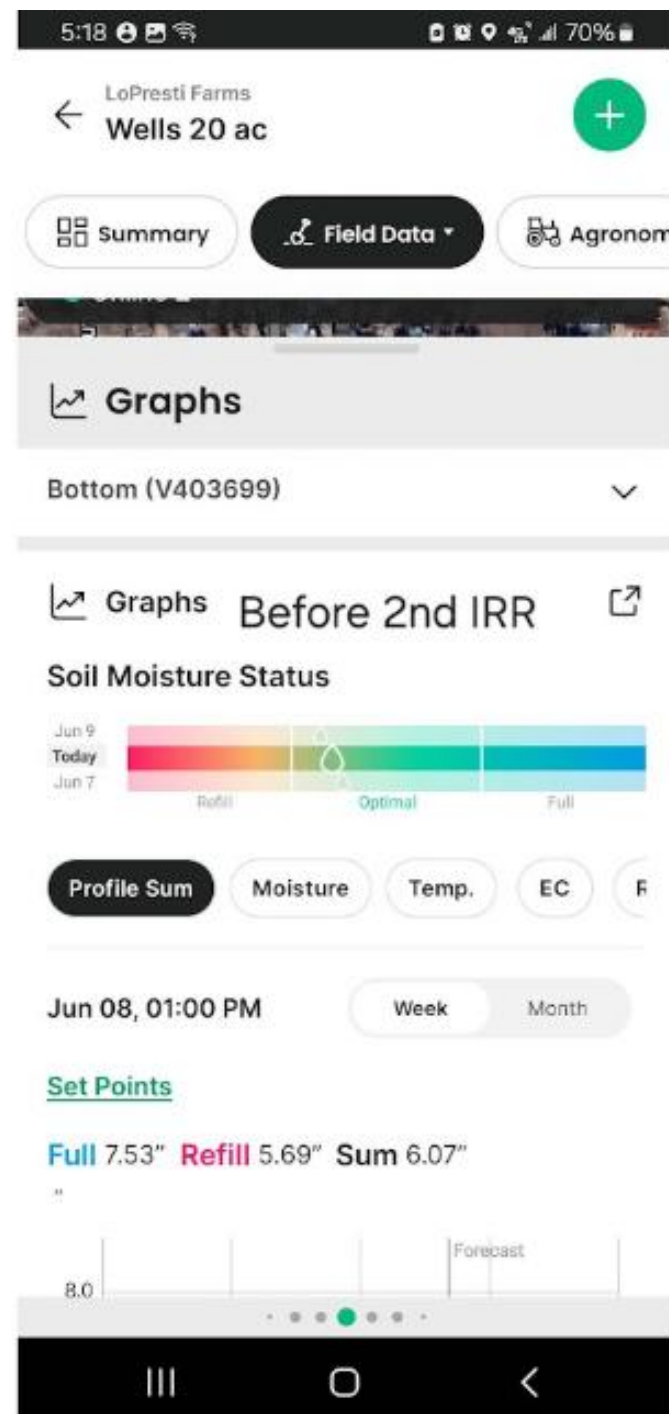
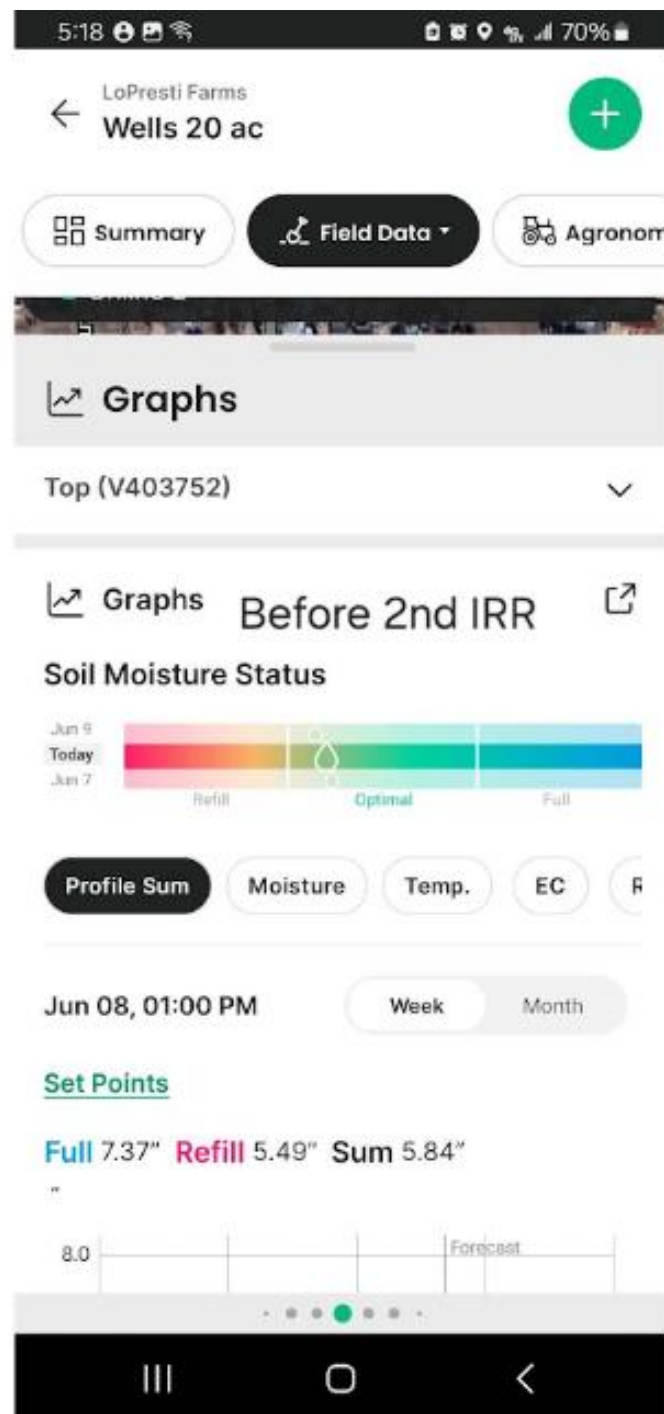
TOTAL IRR 33" H₂O

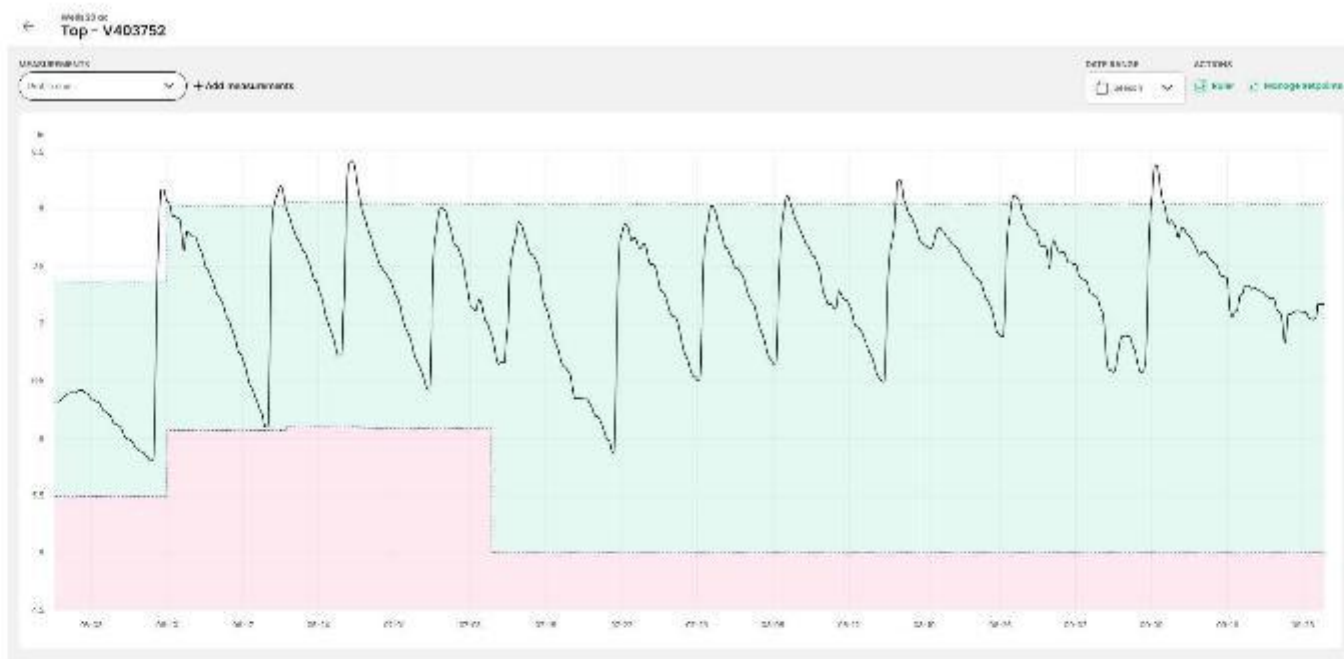












[illegible]

2024

	A	B	C	D	E	F	G
1			Sensor based irrigation			Grower standard practice	
2							
3	yield		297	bu/ac		288	bu/ac
4	gross profit @ \$4.90/bu corn		\$ 1,455.30	per ac		\$ 1,411.20	per ac
5	applied water		5.1	ac-ft		4.2	ac-ft
6	expense (irrigation water)		\$ 188.28	per ac		\$ 152.57	per ac
7	expense (irrigation labor)		\$ 41.38	per ac		\$ 31.03	per ac
8	expense (probes)		\$ 10.00	per ac		\$ -	per ac
9	net profit		\$ 1,215.64	per ac		\$ 1,227.59	per ac



Well 3 or
Top - V403899

MEASUREMENTS

Full Screen

+ Add measurement

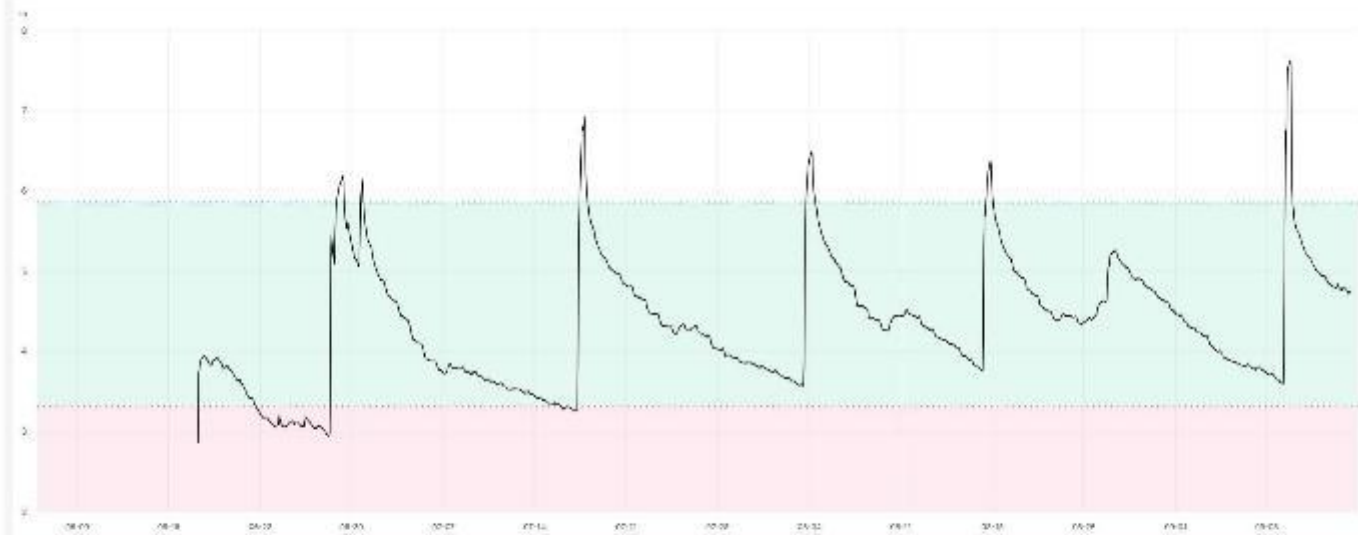
DATE RANGE

Custom Range

ACTIONS

Full Screen

Manage Settings



Well 3 or
Bottom - V403752

MEASUREMENTS

Full Screen

+ Add measurement

DATE RANGE

Custom Range

ACTIONS

Full Screen

Manage Settings



	Sensor based irrigation				Grower standard practice			
	Date	Length (hrs)	Applied H2O (ac-in)		Date	Length (hrs)	Applied H2O (ac-in)	
					4/24/2025	24	7.8	
	6/14/2025	16	5.2		6/7/2025	24	7.8	
	6/28/2025	24	9.3		6/21/2025	24	9.3	
	7/16/2025	16	5.6		7/7/2025	24	8.5	
	8/2/2025	16	5.6		7/20/2025	24	8.5	
	8/16/2025	16	6.2		8/6/2025	24	9.3	
	9/9/2025	16	6.2		9/3/2025	24	9.3	
Total	6 irrigations		38.1 ac-in		7 irrigations		60.5 ac-in	
			3.2 ac-ft				5.0 ac-ft	

2025

		Sensor based irrigation			Grower standard practice	
yield		316.6	bu/ac		320.5	bu/ac
gross profit @ \$4.10/bu corn		\$ 1,298.06	per ac		\$ 1,314.05	per ac
applied water		3.2	ac-ft		5.0	ac-ft
expense (irrigation water)		\$ 117.18	per ac		\$ 183.09	per ac
expense (irrigation labor)		\$ 20.69	per ac		\$ 24.14	per ac
expense (probes)		\$ 20.00	per ac		\$ -	per ac
net profit after irrigation expense		\$ 1,140.19	per ac		\$ 1,106.82	per ac
net profit difference		\$ 33.37	per ac			

