

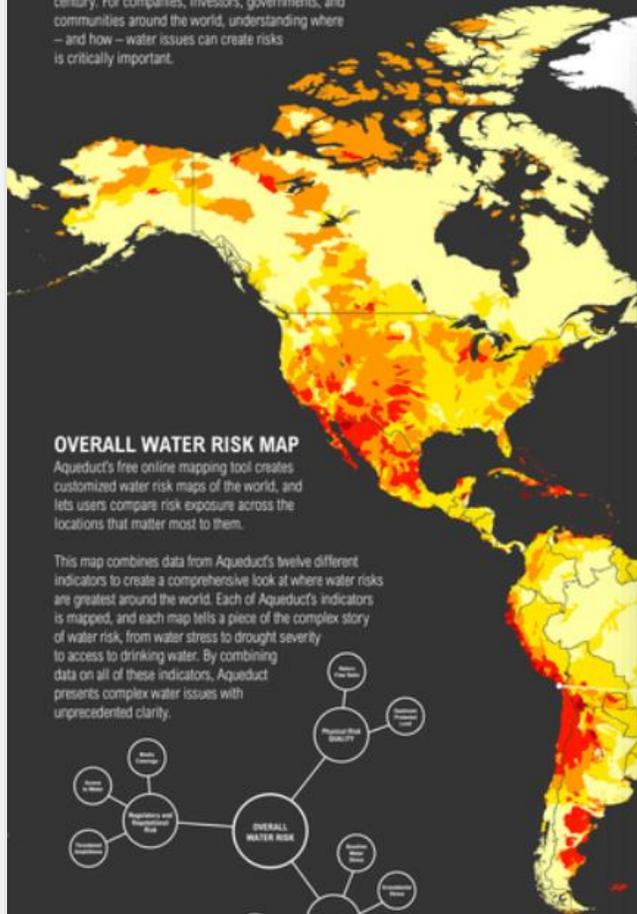
The image features a dynamic splash of water in shades of blue and white, with numerous water droplets suspended in the air. The background is a soft, light blue gradient. The text 'AQUA4D' is centered in the upper half, with 'AQUA' in black and '4D' in a vibrant blue. A registered trademark symbol (®) is positioned to the upper right of the 'D'. Below the main text, the tagline '[Swiss efficiency.]' is written in a smaller, black, sans-serif font, enclosed in blue square brackets.

AQUA4D®

[Swiss efficiency.]

WATER RISK

Water scarcity is one of the defining issues of the 21st century. For companies, investors, governments, and communities around the world, understanding where – and how – water issues can create risks is critically important.



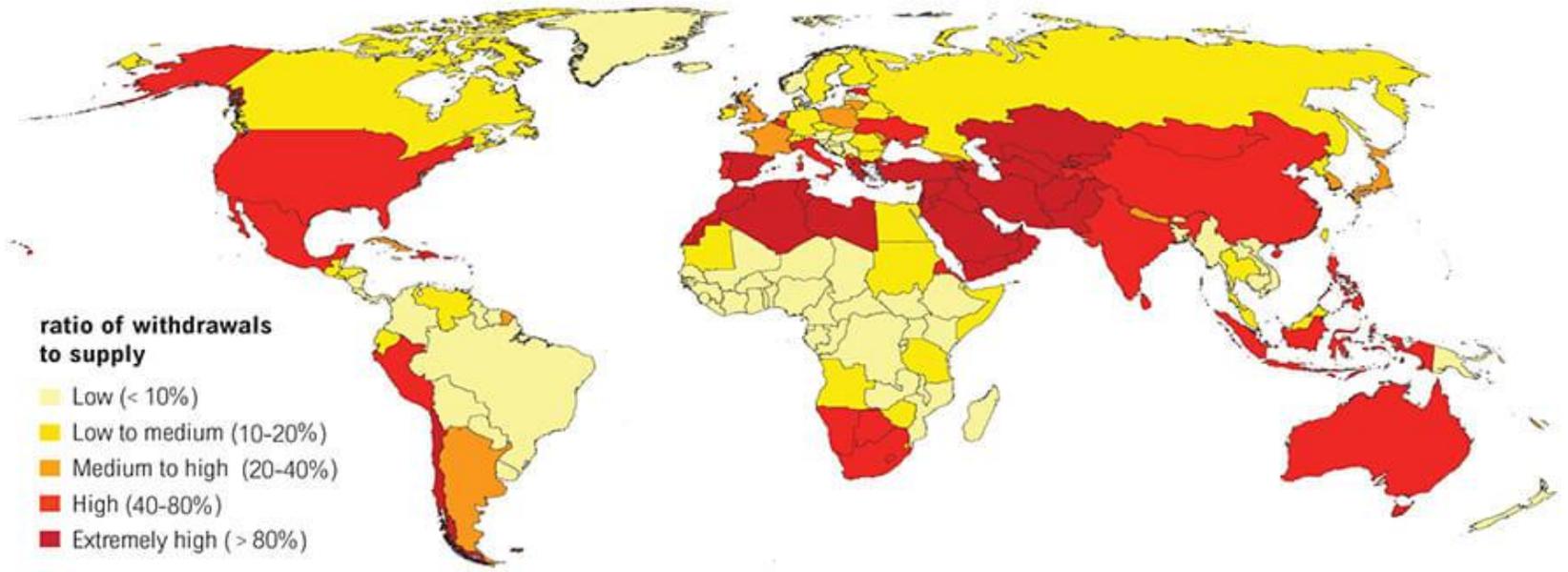
OVERALL WATER RISK MAP

Aqueduct's free online mapping tool creates customized water risk maps of the world, and lets users compare risk exposure across the locations that matter most to them.

This map combines data from Aqueduct's twelve different indicators to create a comprehensive look at where water risks are greatest around the world. Each of Aqueduct's indicators is mapped, and each map tells a piece of the complex story of water risk, from water stress to drought severity to access to drinking water. By combining data on all of these indicators, Aqueduct presents complex water issues with unprecedented clarity.



Water Stress by Country: 2040



ratio of withdrawals to supply

- Low (< 10%)
- Low to medium (10-20%)
- Medium to high (20-40%)
- High (40-80%)
- Extremely high (> 80%)

NOTE: Projections are based on a business-as-usual scenario using SSP2 and RCP8.5.

For more: ow.ly/RiWop

Global water consumption today



Chile suffers the worst drought in 60 years

Chile's populated capital Santiago and the Valparaiso region, could be left without water by 2030.

Addressing Water Scarcity Through Resilient Farming: A Big Opportunity For Companies To Take

by L
8 Jul
 **Anne Field** Contributor @ Entrepreneurs



South Africa unprepared for drought disaster, warns government

Food Business News

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city an emerging threat to food and
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out a grave water crisis still



In November 2018, the first turbine of the Rogun hydropower plant went into operation. On September 9, 2019, the second turbine will be commissioned in honor of Tajikistan's Independence Day.



“Innovative Thinking for Fundamental Changes”





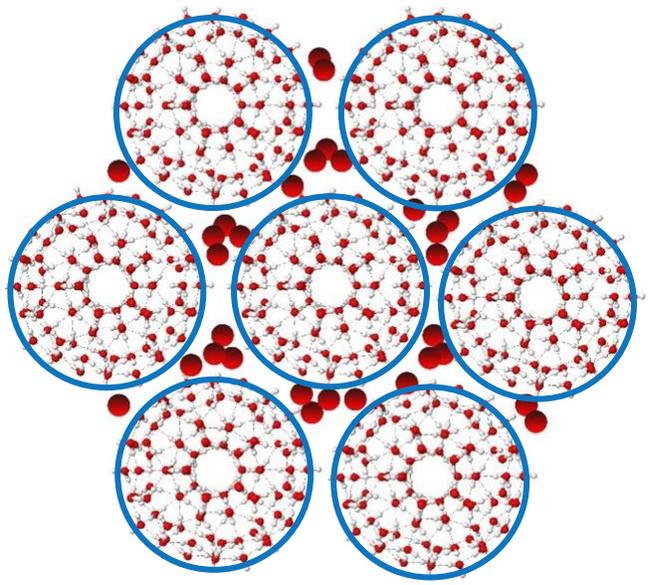
Our technology

Customized Hardware as a Service (HaaS) for Agriculture 4.0 irrigation

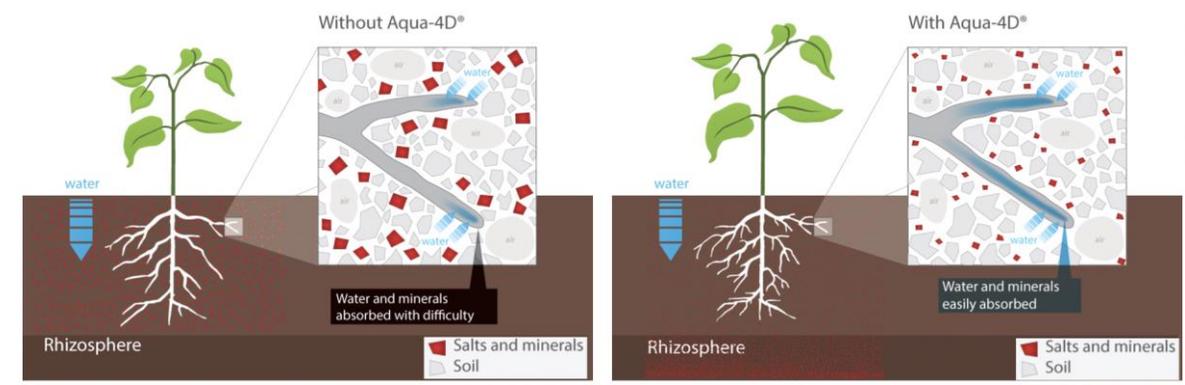
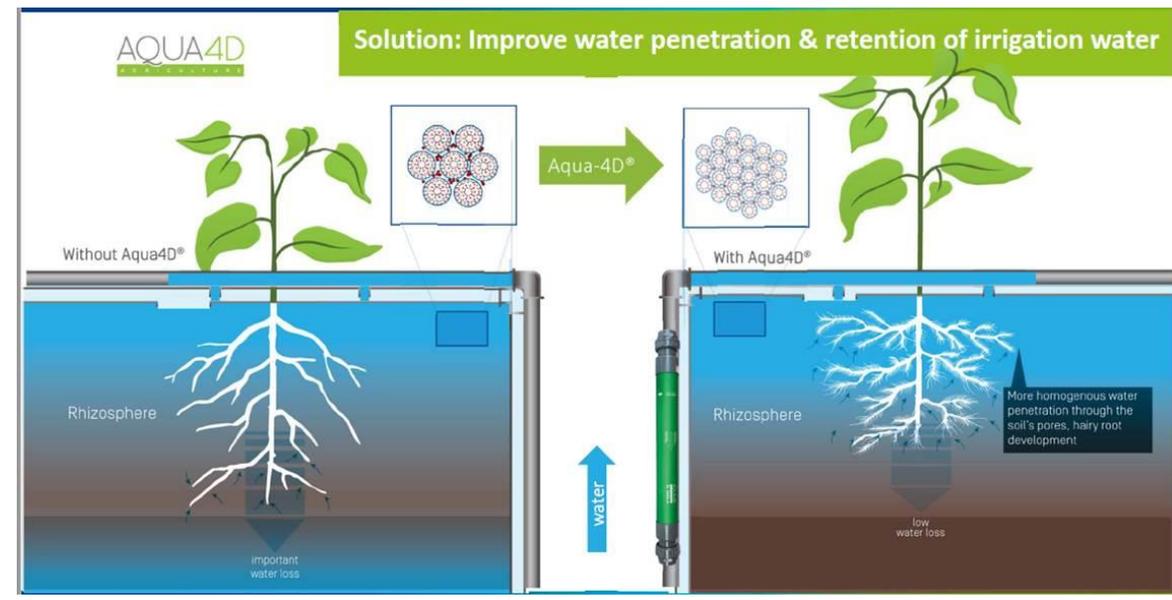
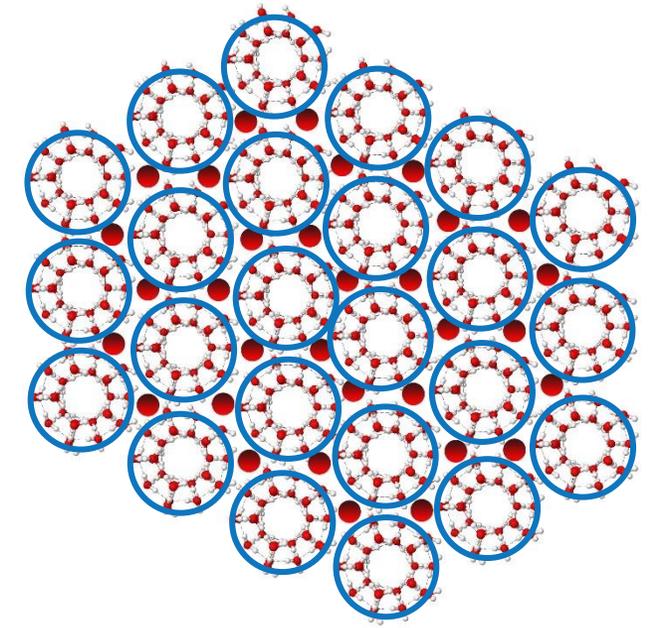
Our systems are fully modular and easily integrated into your existing irrigation setup. All flow rates are catered to, with Treatment Units added as required. Made in Switzerland from highest-quality components, the AQUA4D® system requires no maintenance or consumables, and makes water systems and the overall irrigation process more sustainable, efficient and less labor-intensive.

[Contact us](#) today to see where AQUA4D would fit into your setup.

Agua NO tratada



Agua tratada con AQUA4D®



SOIL RESTORATION + WATER EFFICIENCY



AQUA4D®: a unique technology that restores salt-saturated soils while using less water in the process.



AQUA4D
WATER SOLUTIONS



PROTOCOLO DE TRABAJO SAN JOSÉ FARMS,
PALTO HASS – MEXÍCOLA - EFICIENCIA |
HÍDRICA – ILLAPEL.

05.08.2020 | Patrick Mac Kinnon | Ingeniero Agrónomo

 Este documento se debe completar teniendo en cuenta la situación del cliente y sus requisitos y restricciones.

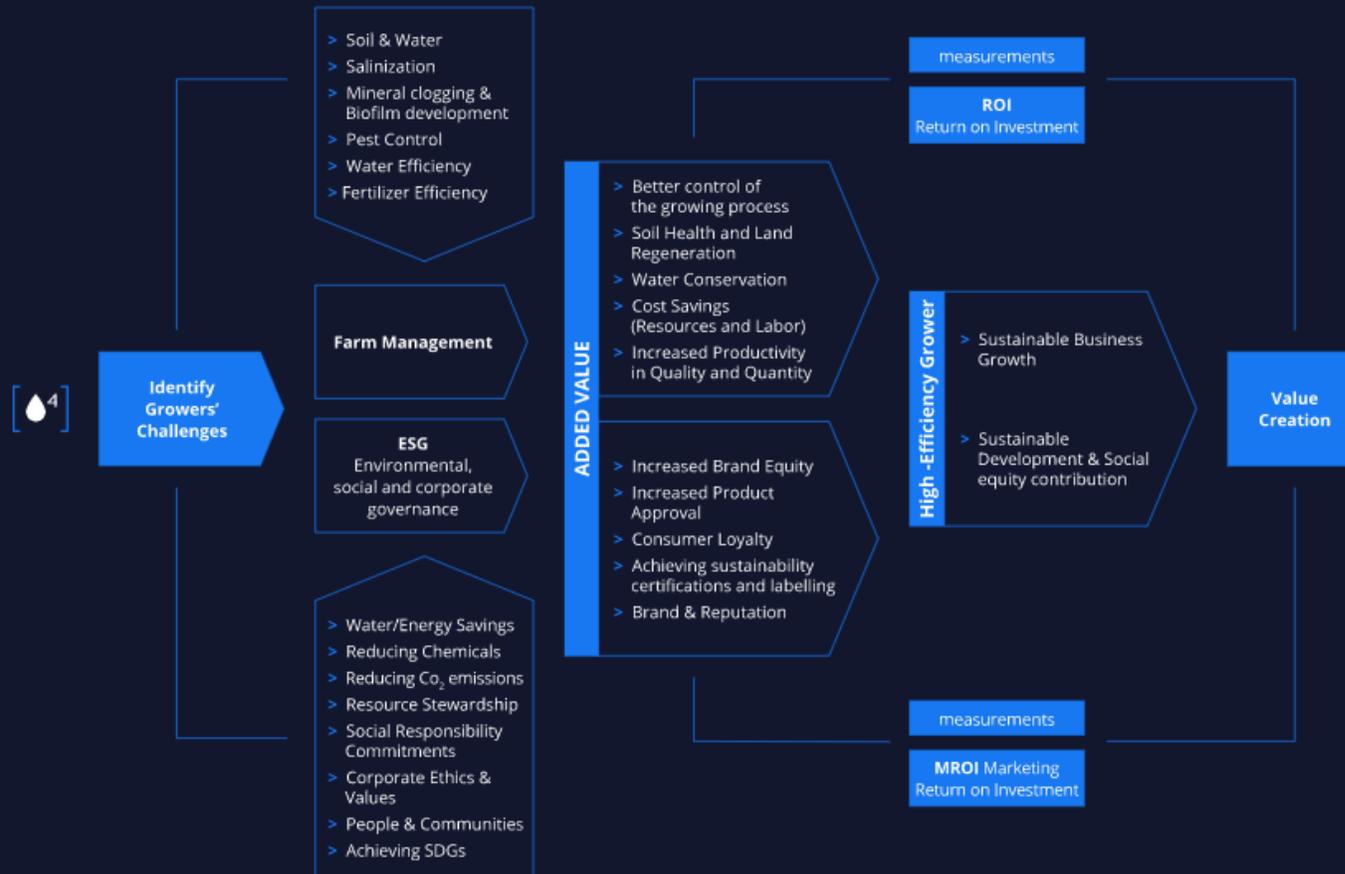
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Forging Shared Value

The AQUA4D® Shared Value Plan creates opportunities for growers and agribusinesses to incorporate shared value into the heart of their business model. With sustainable contributions such as reducing carbon footprints and improving resource use, these are companies which have a positive impact on society, their value chain, and the wider environment.



Richard: Well, to give you an example, during the drought there were of course farmers with a significant lack of water. They were having to grow these trees with maybe a 20% water allocation – normally you want to put on 40 inches, but they had 8 inches to work with through the year. And of course, that first year they had a minimal yield, but the trees were stunted and there was no new growth. This went on for two years, but even after the drought subsided, the effects continued, with reduced yields for several years...



Gemperle & Aqua-4D's CTO at the orchard, March 2019

The Almond Board of California has set a goal to save around 25% water – how realistic do you think this is?

Richard: The goal is simultaneously less water use and converting to extremely efficient systems; I think it's very much achievable. For example, when we redo new orchards and switch from flood irrigation to micros or double-line drip we easily reduce our water by 25%. If you've already installed high efficiency irrigation systems and have state of the art monitoring, reducing water use becomes more difficult.

What do you say to the common reports of significant water use by the almond industry in California?

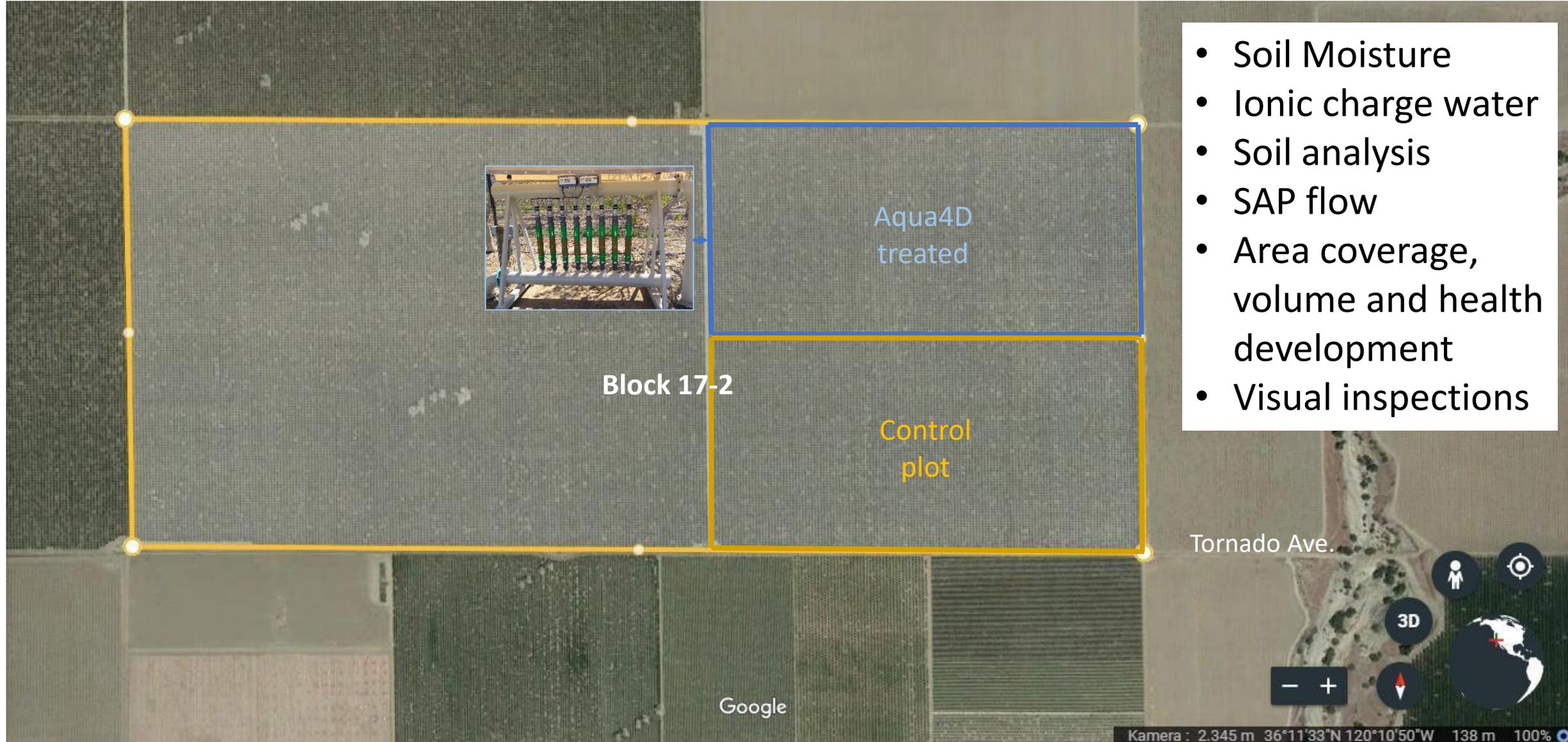
Richard: There's a water function for every single commodity you grow, whether it's wheat, olives, almonds, whatever. And almonds are pretty much on the middle of that. They have quantified water use for essentially all commodities – pound of cherries, ounce of almonds, and the food value from that. When

Identify their Challenges:

Save around 25% water demand

“California produces a whopping [81% of the world's almonds](#) but has suffered from severe water shortages over the last decade. What if this could be turned on its head, with even less water but higher yields?”

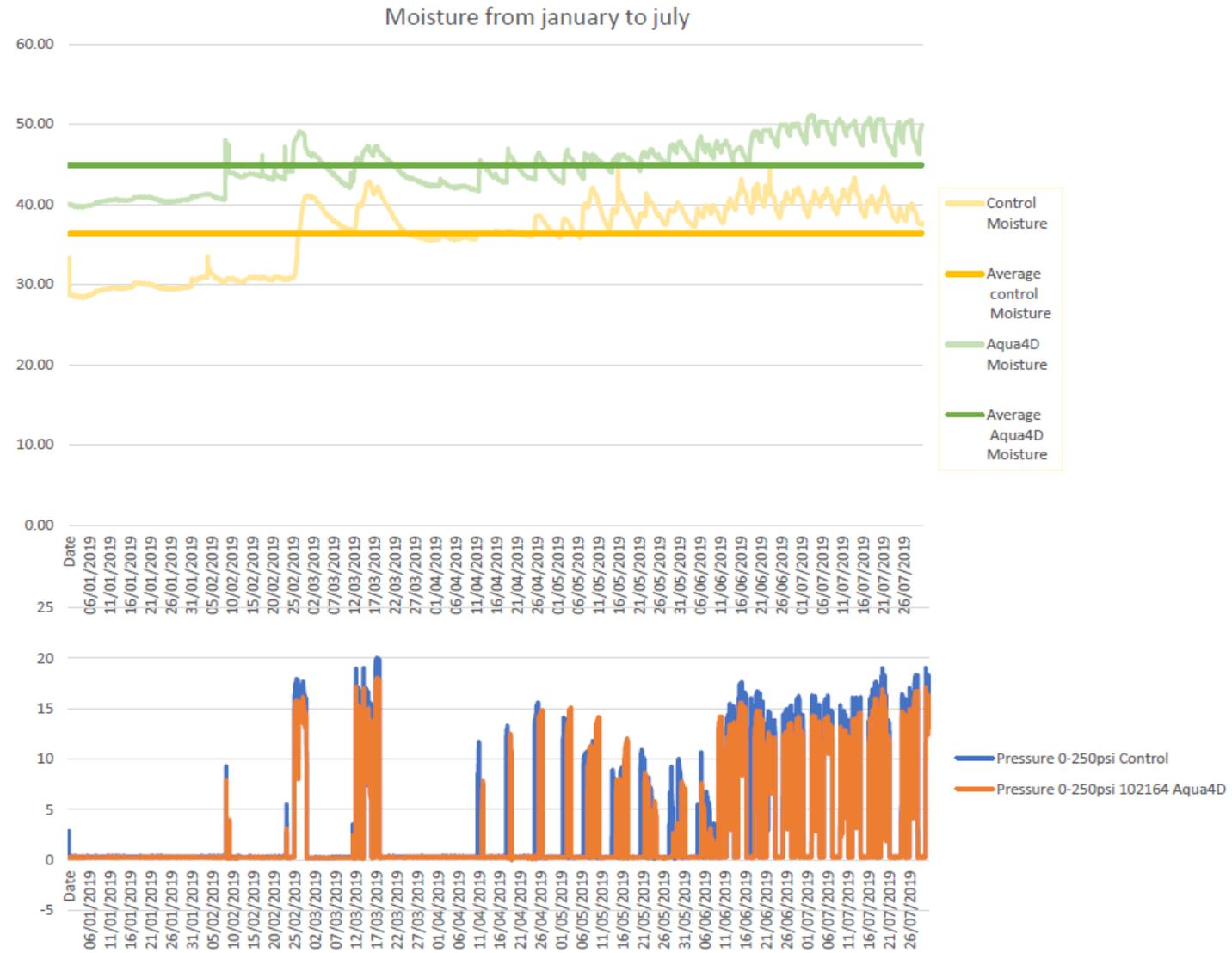
Monitoring AQUA4D® Water-Smart Technology 2019

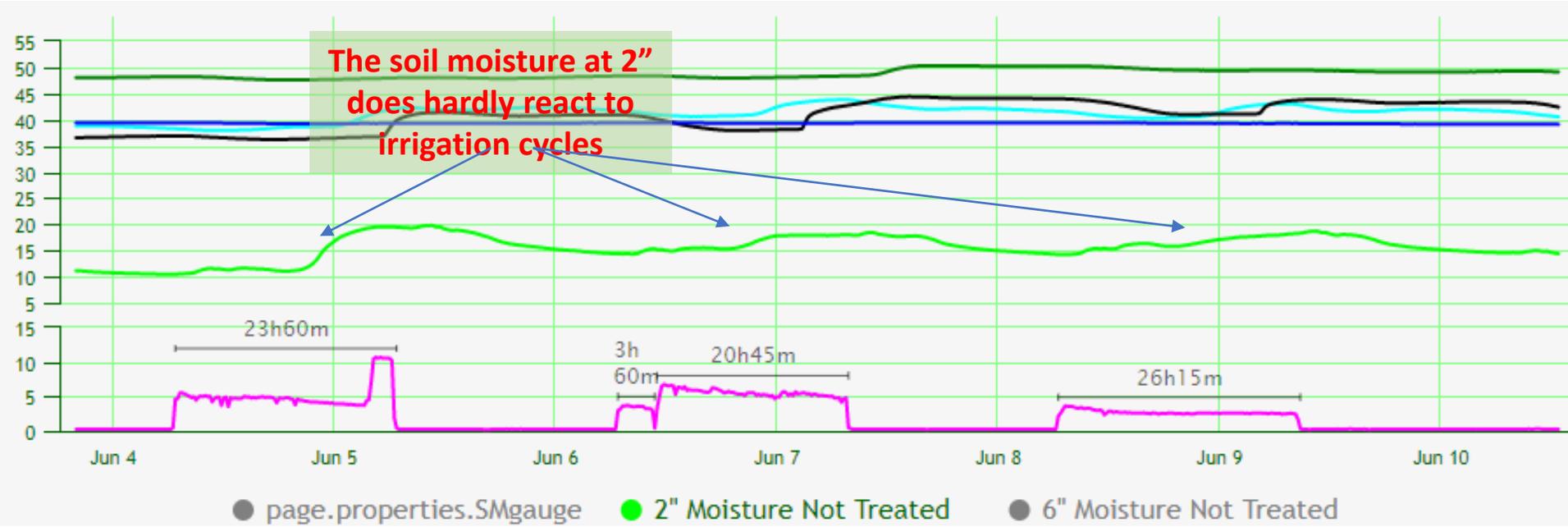


- Soil Moisture
- Ionic charge water
- Soil analysis
- SAP flow
- Area coverage, volume and health development
- Visual inspections

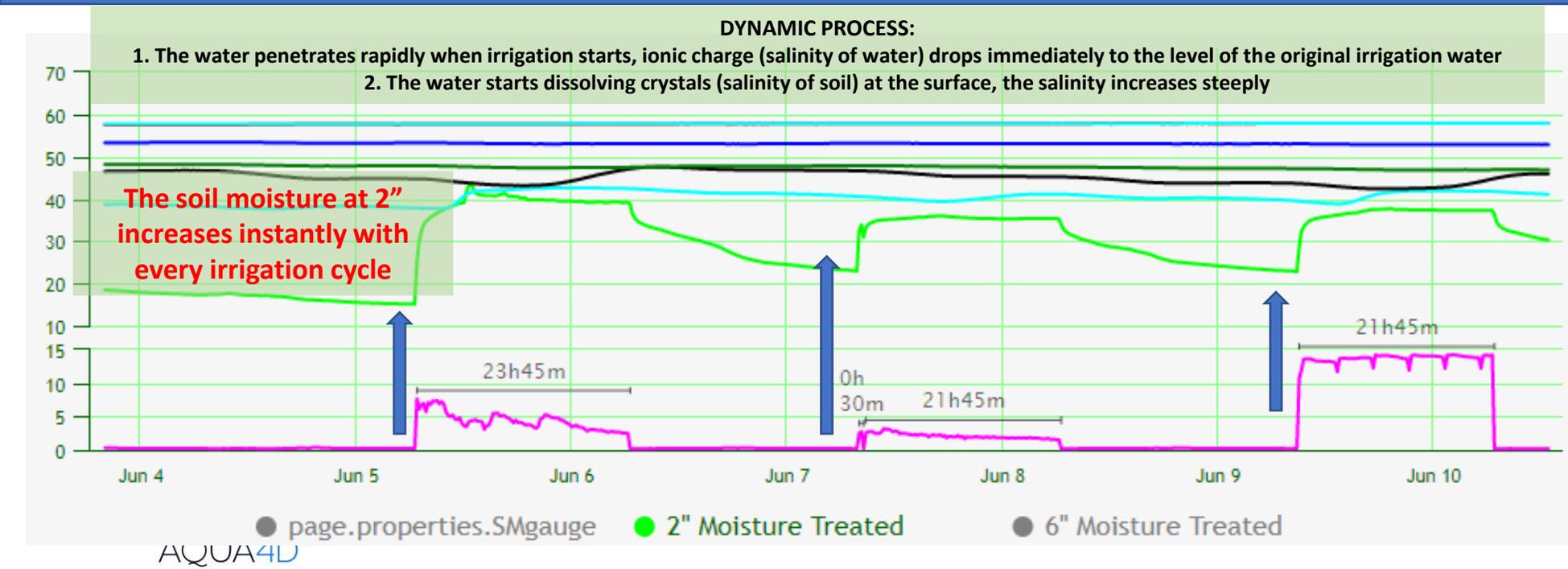
Aqua4D 23%

Better soil water retention after each irrigation, and better hydration of the soil with each watering.
Improvement of the RFU (easily usable reserve)





NON-TREATED WATER HAS CLEARLY PENETRATION PROBLEMS. WHEN IRRIGATING, THE SOIL MOISTURE AT 2" DOES NOT INCREASE. IT CLOGGS UP THE SOIL WITH CRYSTALS



AQUA4D®-TREATED WATER PENETRATES IMMEDIATELY INTO THE SOIL, DISSOLVES EXISTING CRYSTALS IN THE SOIL AND MAINTAINS THE SOLUBILIZED SALTS IN IONIC FORM

The Ionic charge of the water increases every morning, does not respond to irrigation

AQUA4D[®] reduced the EC of the SOIL by 85 % within 2 years



Report of Soil A

Greg Ireland
2430 Deauville Circle
Clovis CA 93619
23215
04

ID: Pistachio

No.	Description	Saturated Paste						
		%	units	dS/m	meq/l	meq/l	meq/l	meq/l
		SP	pH	EC	Ca	Mg	Na	Cl
	RL-->	0.50	1.0	0.01	0.1	0.1	0.1	0.1
	NAPT Methods-->	S1.00	S1.10	S1.20	S1.60	S1.60	S1.60	S1.60
	Handbook 60-->							

1	Treated/Aqua 4D	32	6.7	0.90	2.6	2.4	4.3
2	NonTreated/Control	33	7.0	7.52	31.0	22.2	10.9

Pistachio
Low
Normal
High
(mg/kg is
* = a low
** = EC u
*** = High
SP levels

1	Treated/Aqua 4D	32	6.7	0.90	2.6	2.4	4.3
2	NonTreated/Control	33	7.0	7.52	31.0	22.2	10.9
					-90%	-90%	-75%

THE SAP WATER FLOW SHOWS A CLEARLY DIFFERENT DAILY PATTERN WITH AQUA4D. THE FLOW INCREASES STEEPER AND LONGER OVER THE DAY.

Info

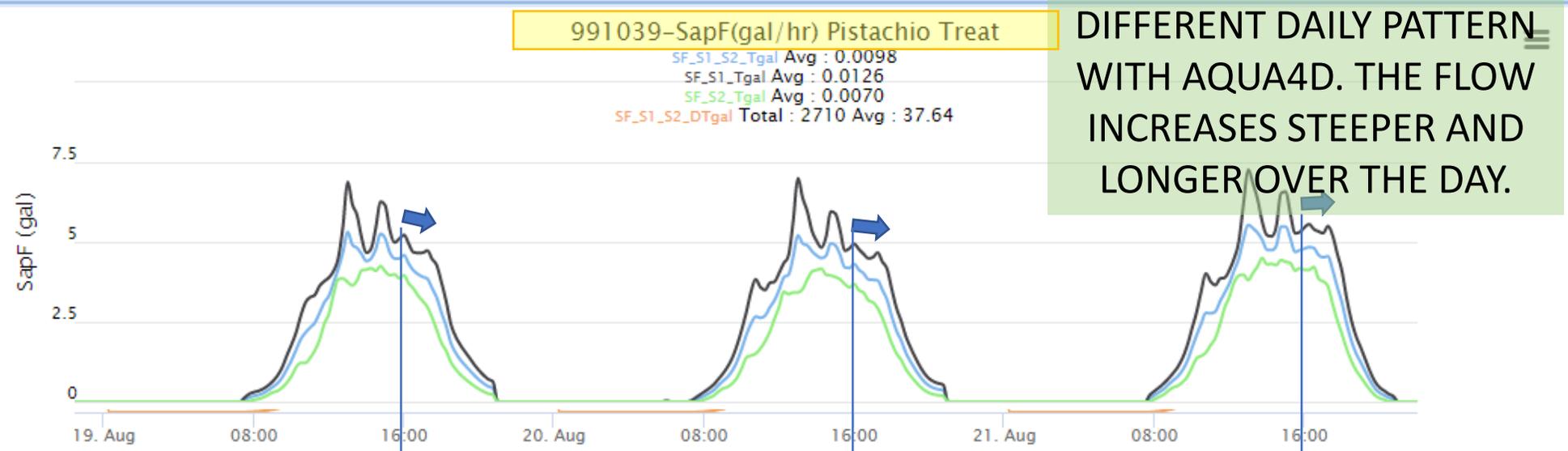
Sapip:

Config: 991039-SapF(gal/hr) Pi:

Date Range:

Start Date: 07/25/2019

End Date: 09/30/2019



Info

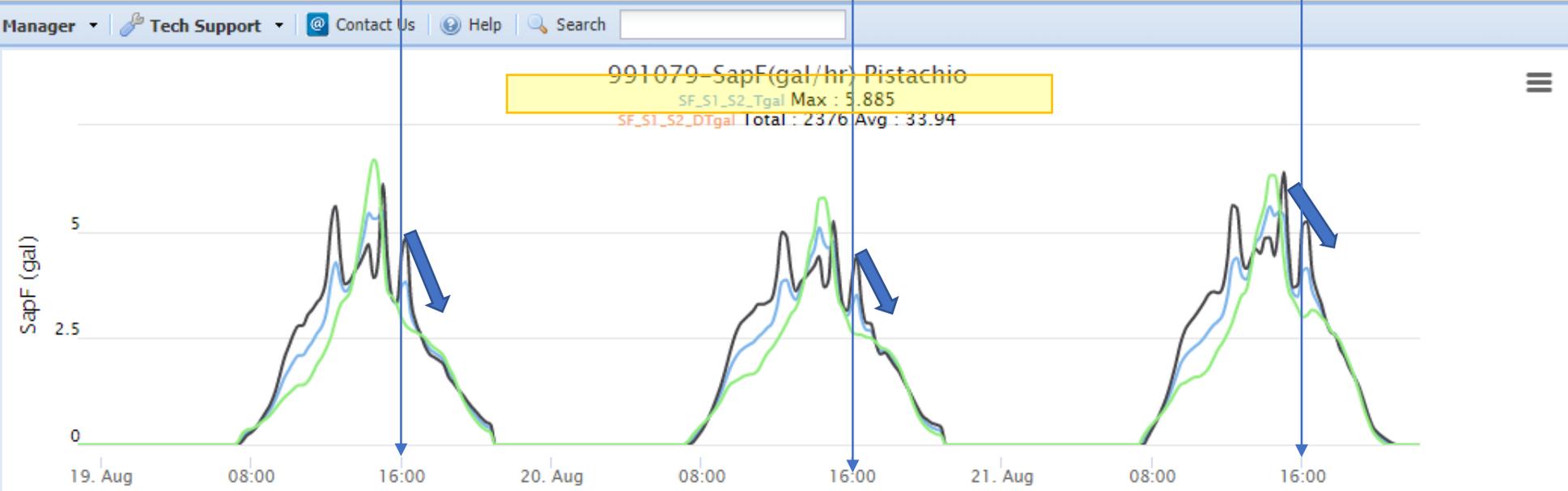
Sapip:

Config: 991079-SapF(gal/hr) Pi:

Date Range:

Start Date: 07/25/2019

End Date: 09/30/2019



Select Orchard
Tornado Ave - Huron

Select Date
18 Sep 2019

Comparison date
06 May 2019

[Remove comparison](#)

Map type
 Drone Satellite

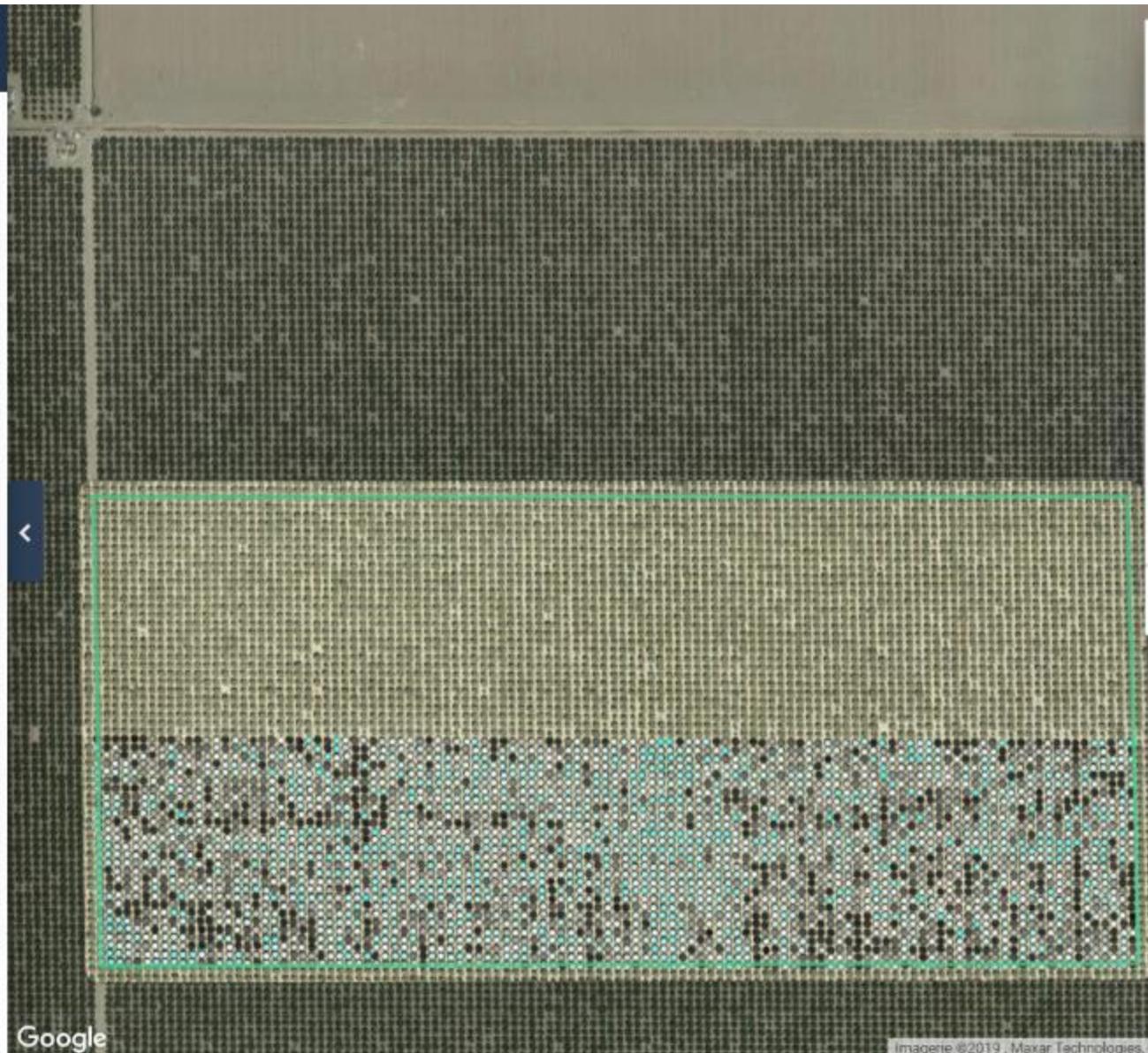
Visual NDVI Elevation

Tree data
Counts Health **Area** More

Trees Zones Orchards

Tree groups
Non treated Pistachio Trees

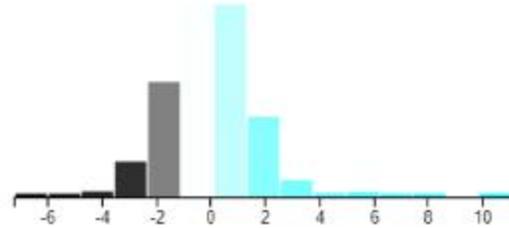
Scouting
New route Scout routes



Tornado Ave - Huron tree data

Showing change from
06 May 2019 to 18 Sep 2019

[Remove comparison](#)



No. trees 3165/3165 Canopy cover 46 %
Row spacing 5.79 m Tree spacing 5.18 m

Tree Group

Aeroview

Select Orchard
Tornado Ave - Huron

Select Date
18 Sep 2019

Comparison date
06 May 2019

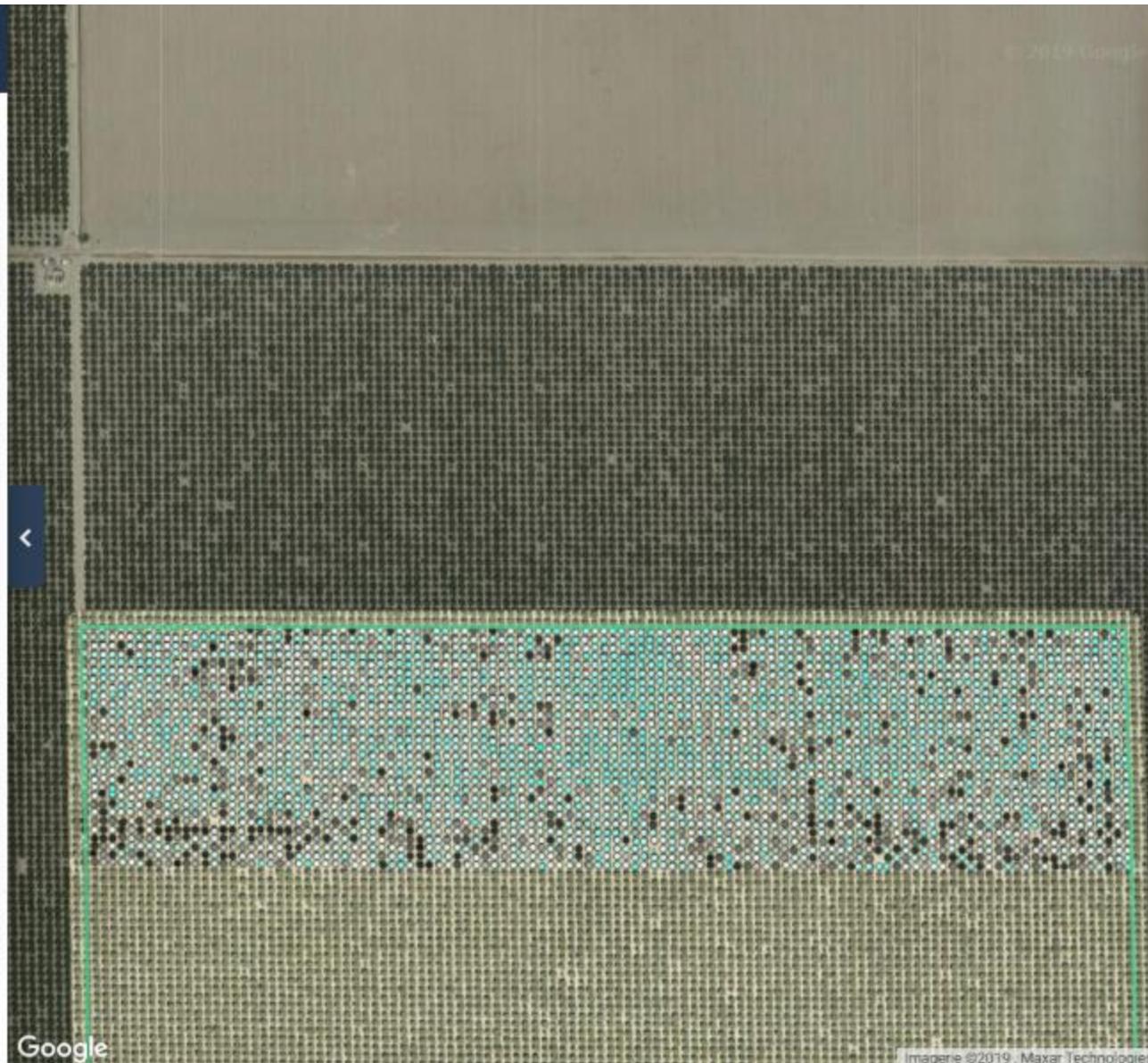
[Remove comparison](#)

Map type
 Drone Satellite
Visual NDVI Elevation

Tree data
 Counts Health **Area** More
 Trees Zones Orchards

Tree groups
Aqua4D treated Pistachio Trees

Scouting
 New route Scout routes



Tornado Ave - Huron tree data

Showing change from
06 May 2019 to 18 Sep 2019

[Remove comparison](#)

No. trees 3272/3272 Canopy cover 46 %
 Row spacing 5.79 m Tree spacing 5.18 m

Tree Group

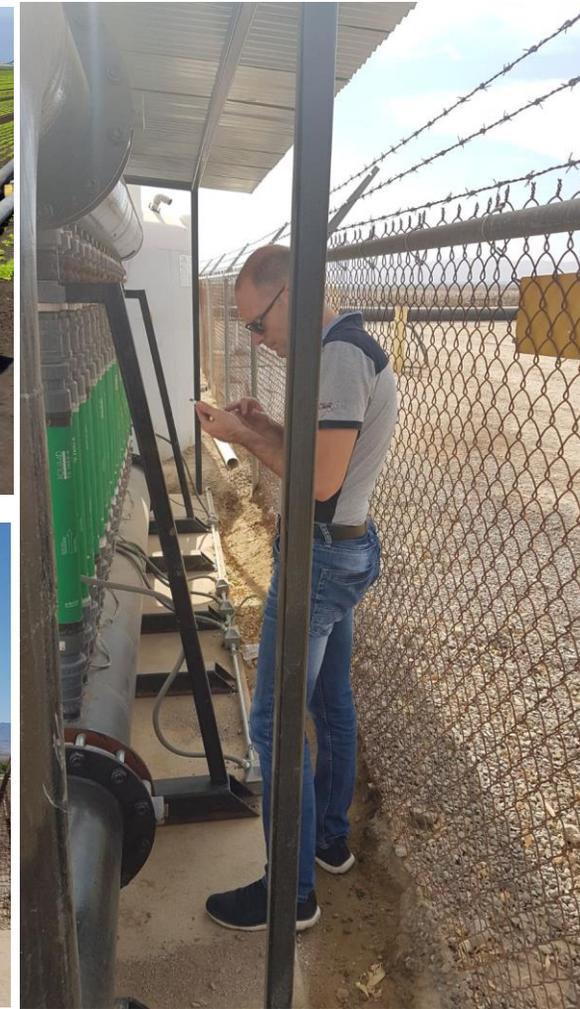
+31.5%
soil moisture improvement

Plot	Soil moisture in the root zone (cbar)
Control	116.75
Aqua-4D®	88.8
Variation	31.5%



Plot	2016	2017	2018
Aqua-4D vs Control yield improvement	20%	48%	65%
Comparative improvement	-	24%	38%

+38%
production increase













Lo Barnechea toma liderazgo en eficiencia hídrica junto con AQUA4D por medio de tecnología sustentable

AQUA4D es una empresa suiza de vasta experiencia en este campo y que ha desarrollado innovadores métodos para conseguir una mejor administración del agua, reduciendo su consumo en un 25% en promedio.



EL COMENTARISTA OPINA
El valor de la ignorancia
Mates Carrasco

FRASE DEL MOMENTO
"Los resultados que tenemos hasta el momento son una obra maestra de silencio, sin ruido y firme. Demuestra la reconstrucción y la unidad nacional. Son un momento oportuno para generar un consenso de acuerdo sobre el rumbo que debe tomar el Perú al iniciar nuestro tercer siglo de vida independiente."

FRANCISCO SAGASTI
Presidente de Perú





Funded by the Horizon 2020
Framework Programme of the
European Union



Industries we serve

Our water-smart technology is used in various settings, with invariably positive effects: greater productivity, resource efficiency and sustainability.

Precision Irrigation



Sustainable Buildings



Animal Health





➤ 50,000 kg to 150,000 kg of CO2 reduction per 20 m³ / h treated by Aqua-4D® systems over an estimated service life of 10 years



CEO Water Mandate



AQUA4D contributes with 11 of the 17 sustainability goals set by the United Nations

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Gracias



AQUA4D® and HAS University, The Netherlands, April 2019