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# Aqua Aid Europe

## 2019 Water Saving Project



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Between 2016 – 2019 we have been performing various field trials to see the water saving benefits in turfgrass in combination with multibranched surfactants.

PSU testing has proven considerable reduction in different conditions in 2 projects.

During field trials in 2018 on Cyprus, we have achieved 30% water reduction on fairways straight after use of the technology.

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**Penn State University study 2016-2018**

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## Penn State University study 2016-2018



**Study AQ-001  
Valentine Turfgrass Research Center**

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## AQ-001 Moisture Study

### Seeding/Soil Makeup:

- L-93 CBG Blue Grass
- Seeded August 2015
- Clay loam soil

### Protocol:

- Untreated Control
- PBS150 – 2 Apps (15L/Ha)
- PBS150 – 3 Apps (15L/Ha)
- Oars HS – 2 Apps (15L/Ha)
- Oars HS – 3 Apps (15L/Ha)
- Untreated Control (Maintain at 35%)

- Application #1 – 3/30/16
- Application #2/#1 – 4/27/16
- Application #3/#2 – 5/26/16

### Notes:

- Dry Down Cycling – start 6/7/16
- Target Soil Moisture – 35%
- Rewetting Point – 25%
- TDR 300 – 7,5 CM probes
- Temp. and RH taken at 9am and 3pm
- Carrier Volume – 500 L/Ha
- Product watered in with 3 mm water
- Disease control as needed



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## Penn State University study 2016-2017



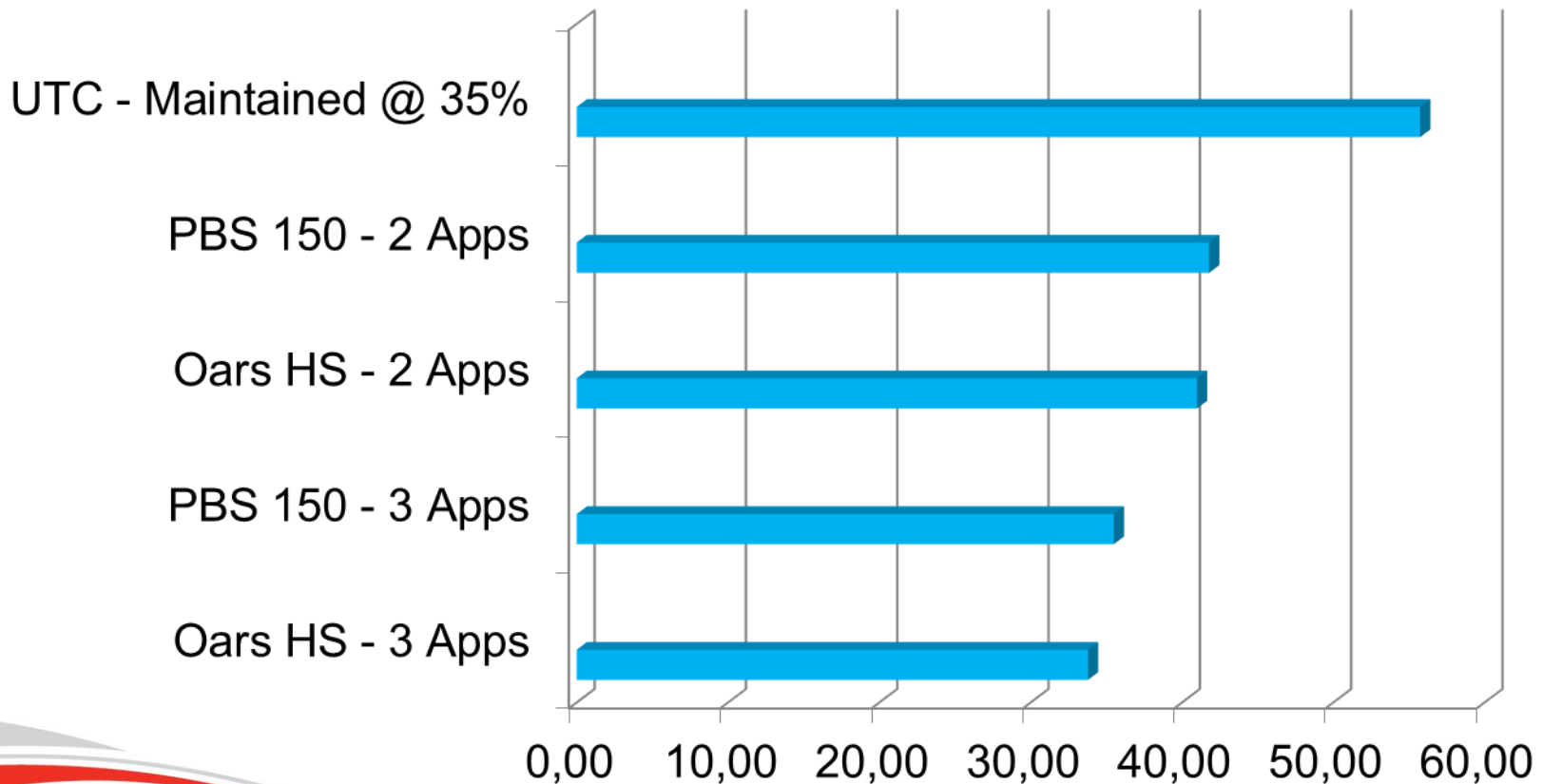


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AQ-001

Average Total Water Added to a 1,5 M<sup>2</sup> Plot June – August 2016



Mean of (3) 1x1,5 M plots

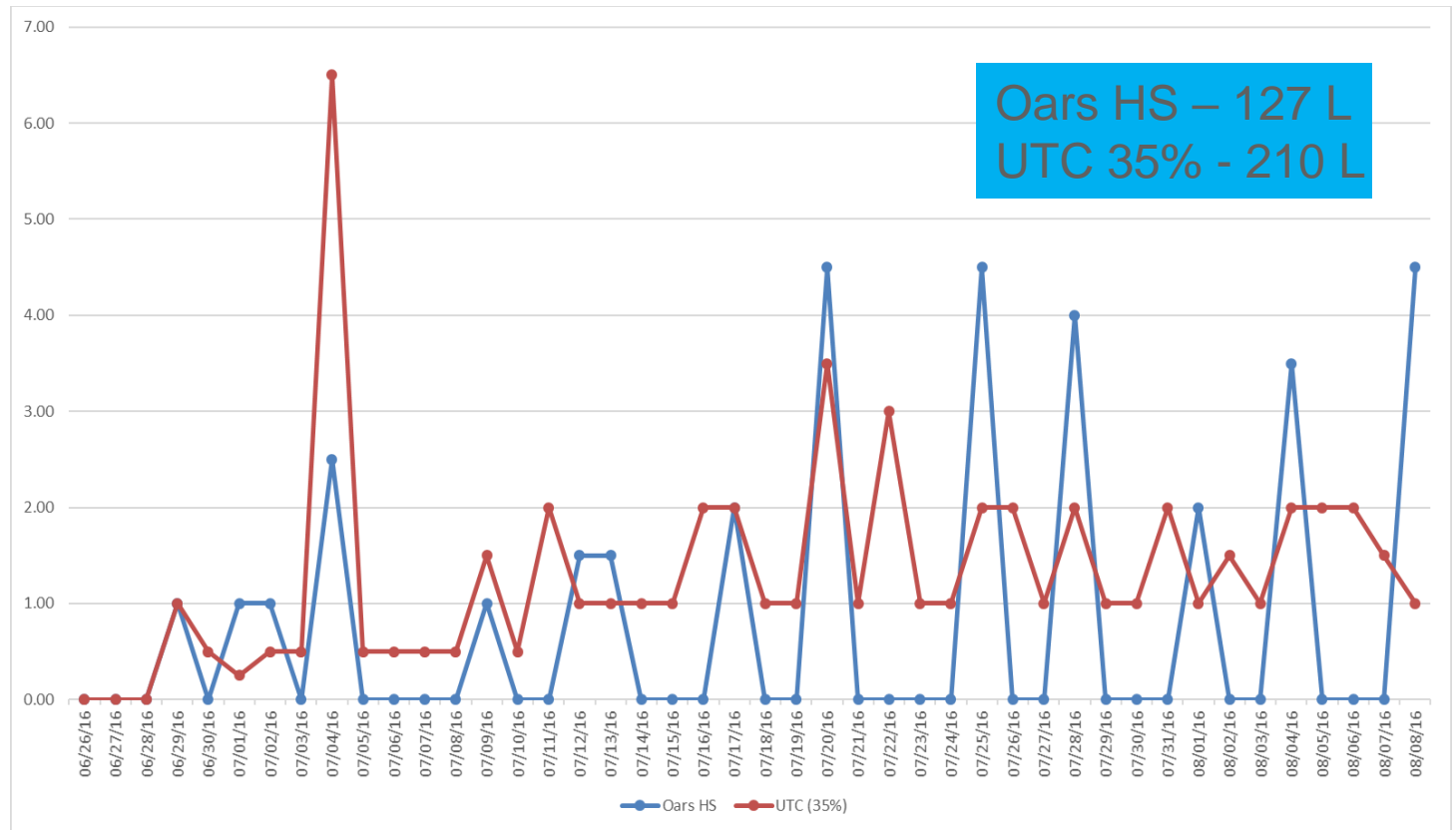


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AQ-001

Oars HS (3 apps) v YTC (35%) 6/8/16 – 8/8/16





# 2019 Water Saving Project

## AQ-002 Moisture Study

### Seeding/Soil Makeup:

- L-93 CBG
- Seeded October 2016
- 8 inch diameter
- 10 inch depth
- 70/30 (Sand/Peat)

### Protocol:

- Untreated Control 1
- Untreated Control 2
- PBS150 – 2 Apps (15L/Ha)
- PBS150 – 3 Apps (15L/Ha)
- Oars HS – 2 Apps (15L/Ha)

- Oars HS – 3 Apps (15L/Ha)
- Application #1 – 3/18/17
- Application #2/#1 – 4/15/17
- Application #3/#2 – 5/13/17

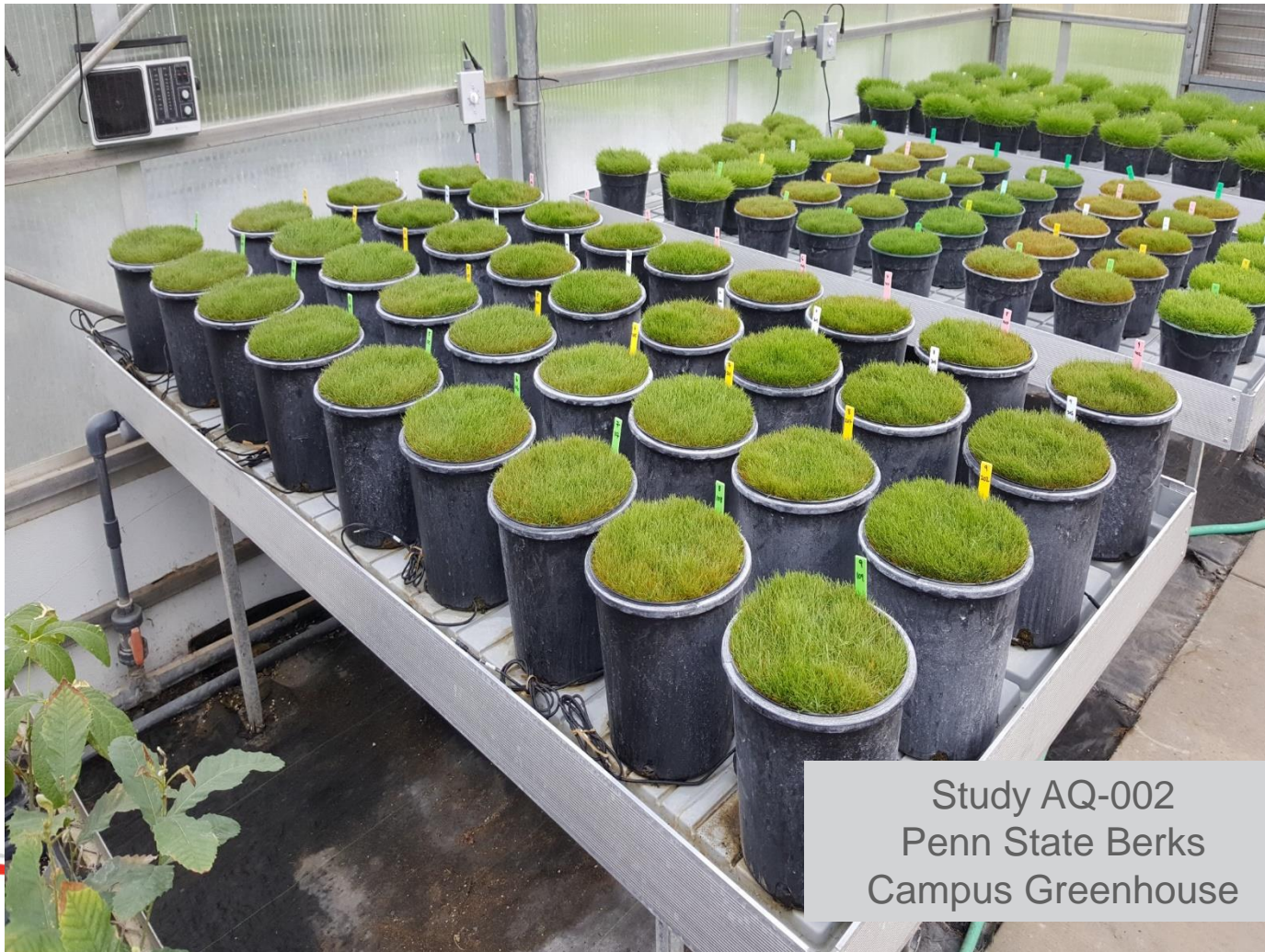
### Notes:

- Dry Down/Rewet Cycling 5/19/17 – 7/14/17
- Target Soil Moisture – 22%
- Rewetting Point – 15%
- TDR 100 w/ 7,5 CM probe
- Temp. and RH taken at 9am and 5pm
- Carrier Volume – 500 L/Ha
- Product watered in with 3 mm water
- Disease control as needed

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Study AQ-002  
Penn State Berks  
Campus Greenhouse

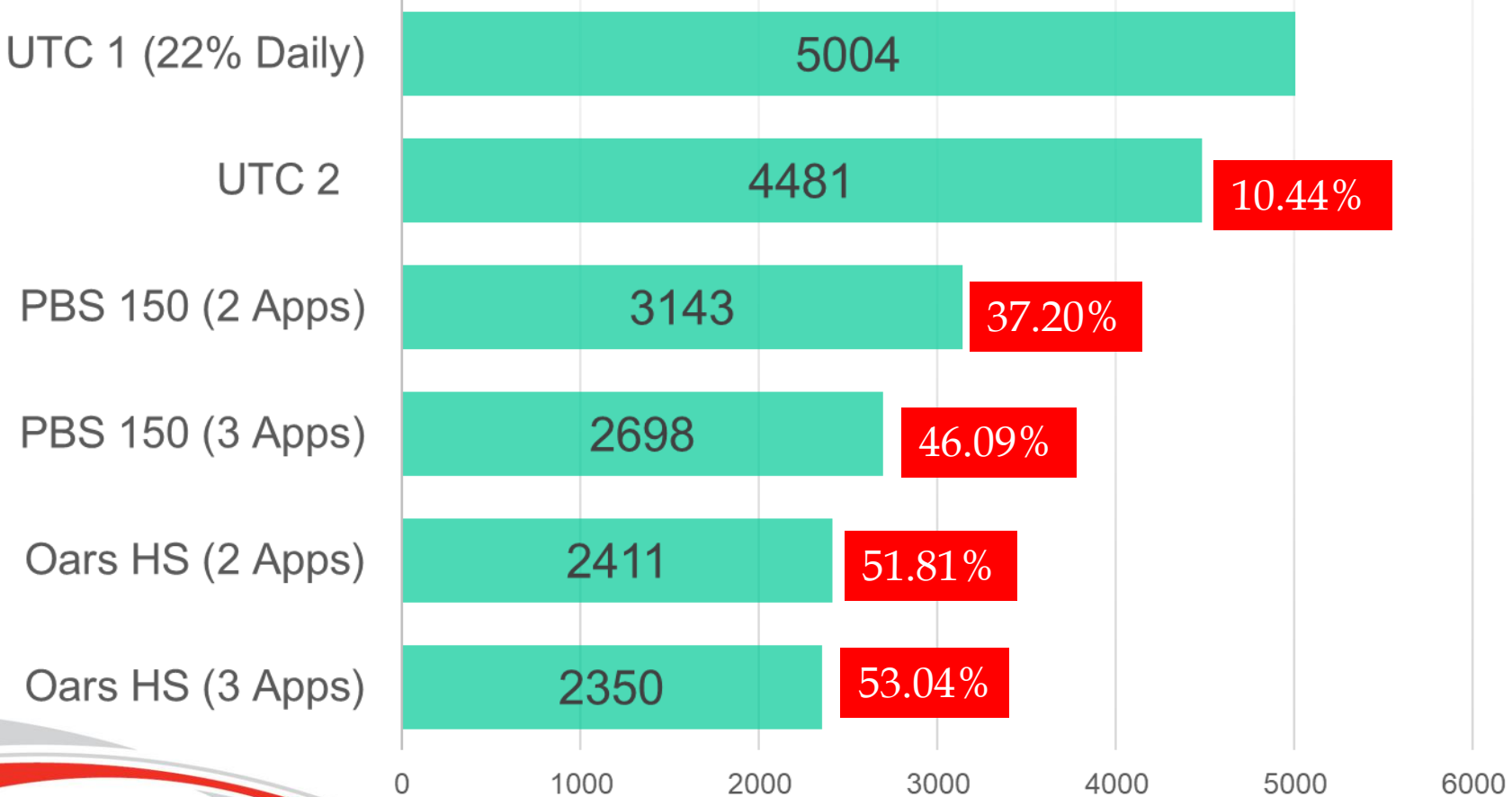


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AQ-002

Average Total Water Added Back (in mL) to a 0,3488 sq.ft. Pot 5/19/17-7/14-17



Mean of 4 Pots

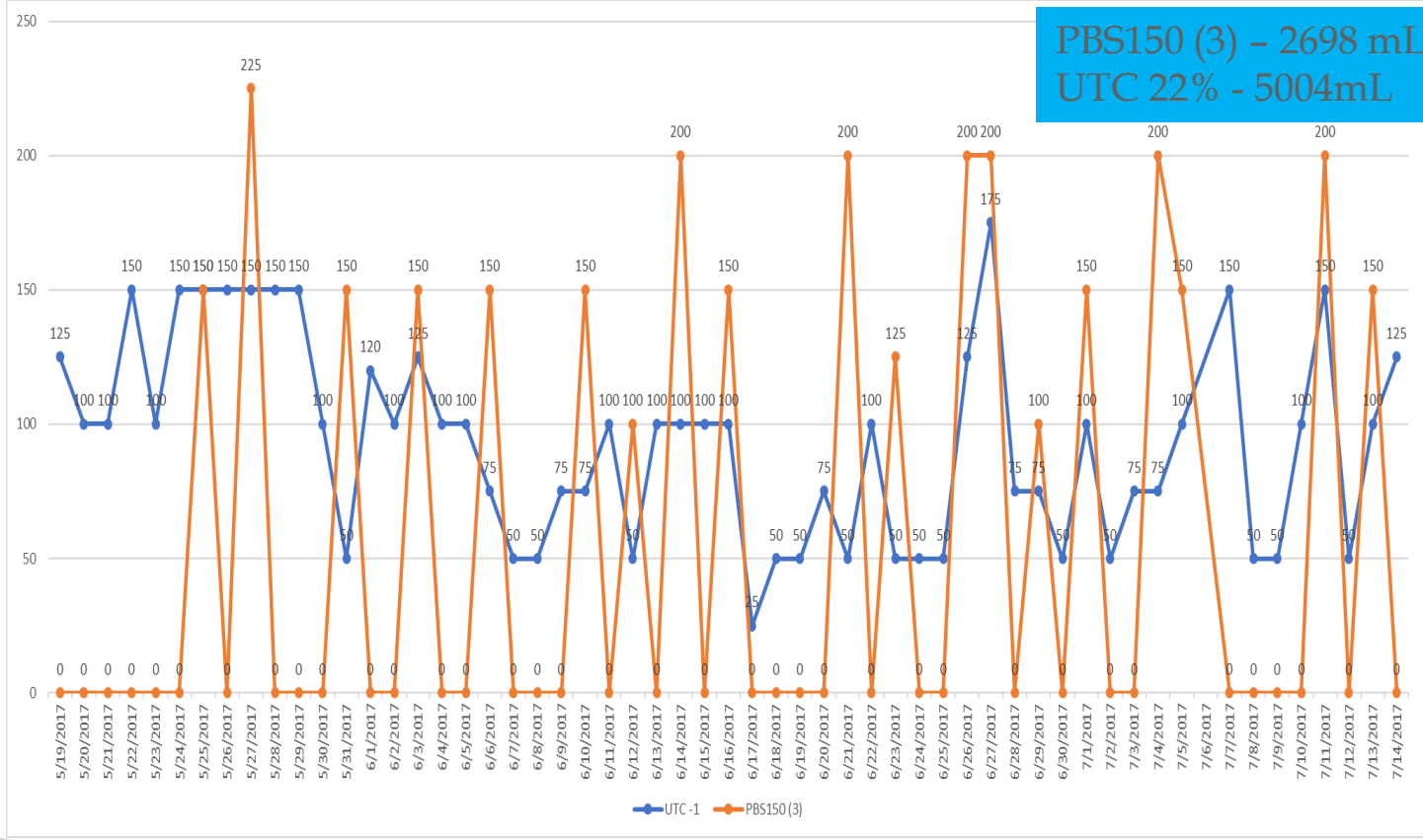


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AQ-002

Rep 1 - PBS150 (3 apps) v UTC 1 (22%) 5/19/17 – 7/14/17





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## Water Savings Example

### Oars HS – 3 apps

<u>0.62 gal.</u>	<u>1780 gal.</u>	<u>77530 gal.</u>	<u>1,938,240 gal.</u>
0,3488ft2	1000ft2	1A	25A
		721 M3/Ha	

### Untreated Control 1 (22% daily)

<u>1.32 gal.</u>	<u>3790 gal.</u>	<u>165088 gal.</u>	<u>4,127,213 gal.</u>
0,3488ft2	1000ft2	1A	25A
		1535 M3/Ha	

<b>Water Savings over 8 week period</b>	<b>2,188,973</b>
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## Feedback from Cyprus

Troon Golf / Secret Valley GC 18 H

No rain from May - Sept

Annual use 250.000 M<sup>3</sup> & Water restriction

Fairway 2 Apps PBS 150 / 25 L/Ha

Applied April / July

Initial water saving 1st year: 30 % on Fairway water use

Reduced hydrophobic conditions

Less Spotwater / labour



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## Benefits of reduced water use

Less turf stress

More effective use of nutrients

Less disease

Cost saving on water

Less issues due to irrigation water quality



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**Thank you for your interest.**

**For more information,  
please contact your  
distributor or  
check our website  
[aquaaid.eu](http://aquaaid.eu)**

