



"How does OARS HS compare to other wetting agents in the field?"

In order to answer this question, Vos Capelle and Aqua Aid Europe conducted a comparative product study last year. On Golf Park De Haenen in Teteringen (The Netherlands), a practical test was set up on the Par3 course, to investigate the functioning of different surfactants. The most commonly used wetting agents in The Netherlands were included in this test set-up. During the entire growing season, the performance (effectiveness), duration of action and uniformity of all products were examined and compared.

The products have been applied exactly according to the label's advice, both in litres per ha and in intervals. See the diagram below for an overview of all products used in this practical test.

Brand	Product	Type	Application	Interval	Application week
Aqua Aid	OARS HS	3D multibranched polymer with OARS technology	13 litres per ha	6 weeks	19, 25, 31 & 37
Aqua Aid	PBS 150 Granular	3D multibranched polymer	160 kg per ha	Once	19
Aquatrols	Revolution	2D block co-polymer	19 litres per ha	4 weeks	19, 23, 27, 31, 35 & 39
ICL	H2Pro TriSmart	2D block co-polymer	25 + 10 litres per ha *	4 weeks	19, 23, 27, 31, 35 & 39
Rhizo Solutions	Aqua Premium	2D block co-polymer	12,5 litres per ha	4 weeks	19, 23, 27, 31, 35 & 39

* First application with 25 litres per ha, following applications with 10 litres per ha.

Trial Set-up

Layout: per product 3 plots of 9 m²
Application: dosage according to label
Water volume: 500 litres of water per ha
Rainfall: 3 mm after application
Measurements: every 2 weeks, 2 measurements per plot
Moisture meter: Fieldscout TDR350 GPS with 7,5 cm measuring pins
Measuring value: VWC%, mode 'standard'

14 measurements on 3 greens of 8 surfaces comes to a total of 672 moisture measurements.



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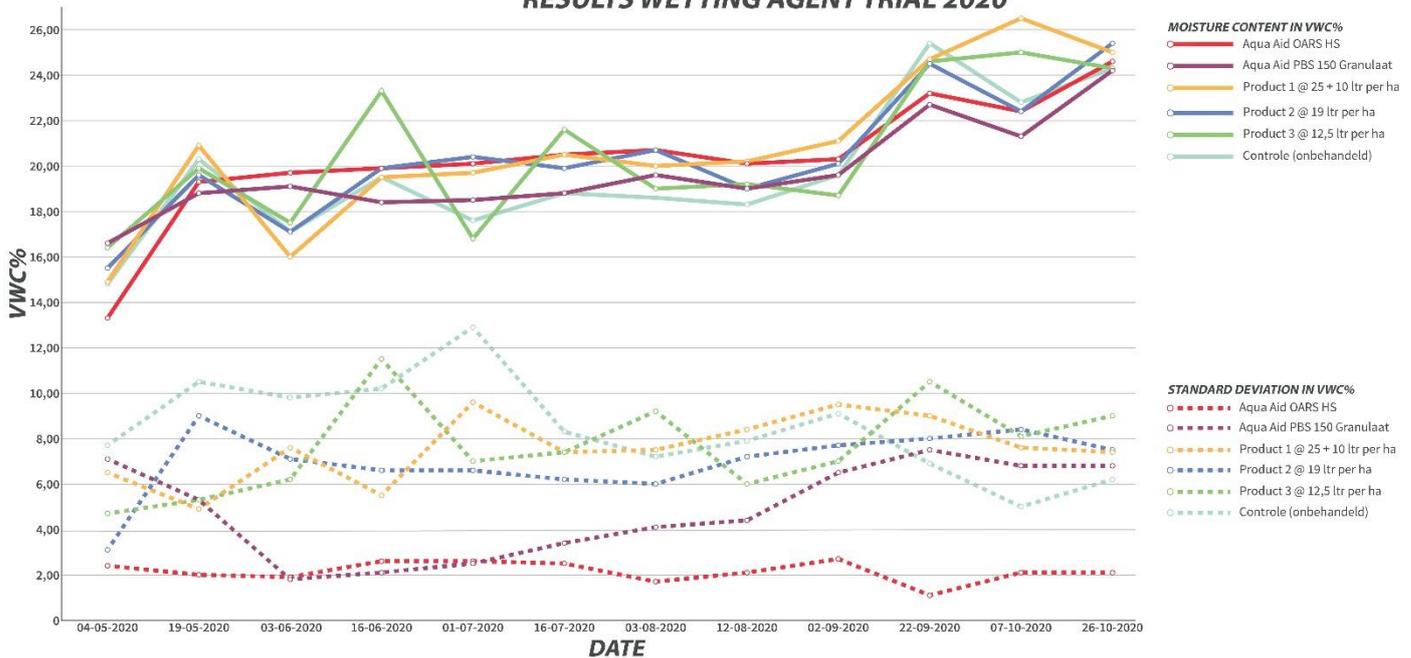
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RESULTS WETTING AGENT TRIAL 2020



Clearly visible: difference in average moisture balance between the different products. In addition, for various products there is a huge difference in the standard deviation of the measurements (difference in highest and lowest measurement).

Conclusions

The 3D structure of the Aqua Aid OARS HS demonstrates its qualities in this test. Due to a better water distribution in the top layer, there are more active molecules per cm² and with a pure formulation without alcohol or monomers, OARS is the most effective and uniform wetting agent in this test.

// *Higher soil moisture balance with wetting agents.* All wetting agents result in a significantly higher soil moisture balance compared to the untreated control plots.

// *OARS HS scores best on average VWC%.* During the entire test period, OARS HS scores highest on average in measured moisture percentages. In addition, the measured moisture percentages remain stable throughout the period without peaks. In comparison, Aqua Premium and Revolution showed significantly increases after each application.

// *OARS HS is very uniform in VWC%.* The spread in measured values (highest and lowest measurement within the plots) is less than 1% with OARS HS, meaning a lowest measured moisture percentage of 22% and a highest of 24%. Therefore, the soil moisture percentage showed stable throughout the testing period, and does not change after an application, rainstorm or period of drought. As a result, the plant's stress is reduced to a minimum.

// *Longer effect of OARS HS.* This test has demonstrated that OARS HS is active for a minimal of 6 weeks, while the maximum active period for all other products is 4 weeks. OARS HS even achieves this duration with a dosage of 13 litres per ha (the lowest dosage of all products). As a result only 4 applications are necessary, compared with 6 application for the other products. Therefore, saving in litres of product as well as labour costs.

// *OARS HS works well in lower doses.* 4 applications of 13 litres totals to only 52 litres of product. With 6 applications of Aquapremium, total amount of product is 75 litres and with 6 applications of Revolution, you end up with 114 litres of product per ha.

// *Water use can be reduced by 35% if the humidity behaviour is accurate.* Earlier studies (conducted by Penn State University) on the effect of OARS HS already showed that accurate and uniform moisture behaviour can lead to a reduction in water use of up to 35%. This field study confirms this finding.

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