

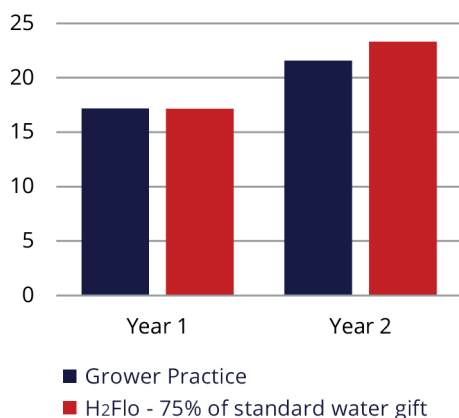
H2Flo®

Apple



Trial Information

Average yield / tree



H2Flo is a unique blend of surfactants designed to move water and fertilizers quickly and efficiently through soil. H2Flo leads the way as a water conservation products with the highest concentration of active ingredients (88%) among the most advanced wetting agents available today.

Use H2Flo as an initial humectant or during the normal irrigation cycle to aid the movement of fertilizers through the soil and thus help balance the EC levels.

Recommendations for use

H2Flo can be applied all year round, by drip, centre pivot and overhead irrigation*.

When using stock solution tanks, always fill them up before adding H2Flo. For best performance we recommend to use H2Flo in light - sandy soils, preferably containing >1.5% organic matter.

Trial set-up

Objective

Demonstrate that applying H2Flo results in a reduction by 25% in irrigation volume while maintaining or increasing yield.

Duration

2 years trial

Location

Independent trial station, UK

Crop

Apple / Cox la Vera

Application method

Irrigation

Soil type

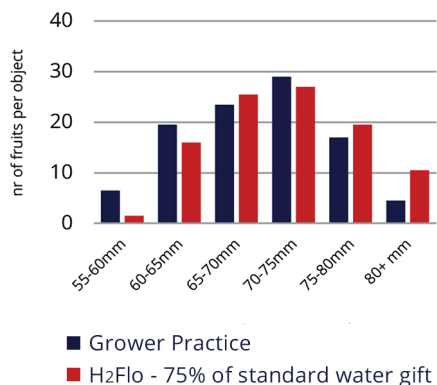
Loamy silt clay (Sand 13%, Silt 64%, Clay 23%)

Assessments

Total yield

Water distribution

Fruit size distribution
average of both years



**If applied via a boom sprayer please consult your local ICL Specialty Fertilizers adviser*

CONCLUSIONS

- H2Flo reduced irrigation by 25% without any detrimental effects on yield or fruit size:
 - average yield increased by 4%
 - H2Flo increased the amount of fruit classed 75 mm or larger.
- Apple growers could save an average of 1100 euro/ha/year on irrigation costs with H2Flo.

Treatments

The apple crop in this trial needs 27 mm of water per week. This base line was adjusted weekly for rainfall. Irrigation water was added in addition to rainfall when necessary to reach 27 mm/week.

Grower practice	H2Flo		
Treatment - 100% irrigation regime + rainfall	Treatment - 75% irrigation regime + rainfall		
<i>The water was supplied via irrigation system without any water conservation agents.</i>	H2Flo was applied 3 times during the crop cycle in both years:		
	Application	Dosage	Timing
	1 st application	1.2 l/ha	May
	2 nd application	0.6 l/ha	June
	3 rd application	0.6 l/ha	August
	Total	2.4 l/ha/year	

Both treatments received the same nutrition program.

Financial evaluation

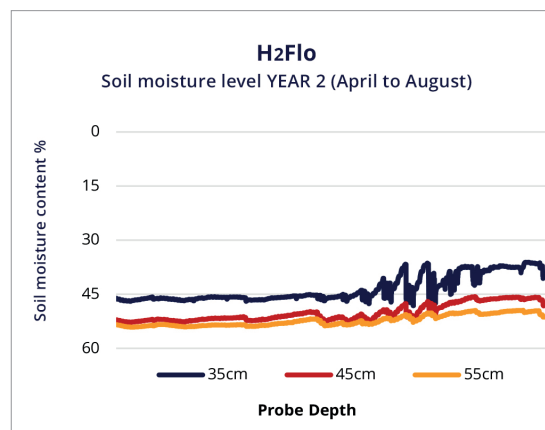
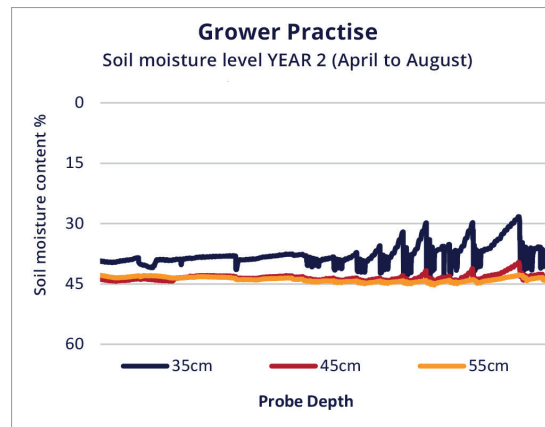
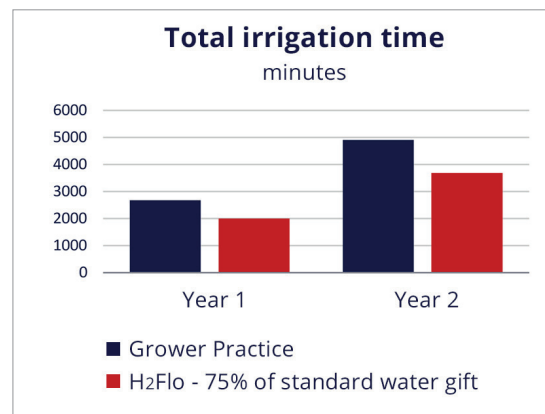
Aspects	Grower Practice	H2Flo	H2Flo vs Grower Practice	Savings with H2Flo
Water regime	100%	75%	-25%	
Irrigation	3792 m³/ha	2844 m³/ha	-948 m³/ha	€ 1137,- per ha*
Pumping	126.4 hours	94.8 hours	-31.6 hours	€ 410,- per ha**
Yield	38.74 kg/tree	40.45 kg/tree	+1.71 kg/tree x 2.381 trees/ha= 4.07 MT/ha	€ 814,- per ha***
H2Flo	0 l/ha	4.8 l/ha	+4.8 l/ha	- € 85,- per ha****
Differences				€ 2276,- per ha/ 2 years

* Water cost was calculated based on the UK price for 1 m³ of water = £1

** Pumping cost was calculated based on diesel pumps with a fuel consumption of 10 l/hour and a diesel cost of 1.3 euro/l. Labor cost was not taken into account!

*** Yield was calculated based on an estimated apple price of 200 euro/MT.

**** H2Flo price is subjective and can differ between countries.



Why does H2Flo perform better?

- H2Flo enhances both horizontal and vertical movement of water into the soil, stimulating the root system to use the available nutrients as efficient as possible.
- H2Flo lowers the surface tension of the water, allowing it to penetrate into the soil as it can spread more easily between the soil particle. In this trial, H2Flo improved soil moisture at different soil depths (by 12.5% at 35 cm depth and by 16% at 45-55 cm depth).
- In reduced water conditions, with the same nutrient program, H2Flo maintains an optimal soil moisture level for plants. This increases plant productivity and final crop quality, especially in sandy soils.

Attention

Recommendations in this trial info sheet are based on local soil and/or water analyses. Please contact your local ICL Specialty Fertilizers adviser for your personalized fertilizer recommendation. Consult www.icl-sf.com for your contact in the region.

Distributed by:

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