

H₂Flo[®]



Our wetting and water conservation agent
can reduce your water management up to 25%!

www.icl-sf.com

ICL Specialty
Fertilizers



Why use wetting and water conservation agents?

According to Aquastat, Agriculture is by far the largest consumer of fresh Earth's available water, reaching 70% of the total usage. Water is essential for every process within the plant. It can be considered as the "vital nutrient", being involved in most of the plant functions - rooting development, growth, turgor, photosynthesis etc.

All water properties are important but particularly surface tension and moisture tension into the soil are key parameters which can lead to inefficient water use, resulting in low infiltration rates and puddling. Usually, puddling leads to run-off and evaporative loss of water.

In the coarse textured soils, like sandy ones, the high surface tension of the normal water causes mainly a vertical flow, not wetting the soil profile uniformly. Sandy soils hold water poorly, resulting in approx. 80% of the water to be lost by run-off and evaporation.

In this situations, the soil can easily become dry and extra water is needed to properly wetting it. This can only be translated in increasing your costs for water, pumping and labor!

In extensive trials it has been demonstrated that, by using H₂Flo, growers can reduce the irrigation water up to 25%, while maintaining or obtaining higher yields. In areas where water contains a high level of salts, this water reduction means lower level of salts in the soil and thus improved growing conditions for plants



Untreated water



Water treated with H₂Flo

REDUCE
your water management
up to 25%
with H₂Flo

What is H₂Flo?

H₂Flo is a blend of soil surfactants which reduces the surface tension of irrigation water and allows both vertical and lateral movement of water. H₂Flo allows growers to maximize the efficacy of irrigation, reduces water rates and improves yields.



H₂Flo mode of action

Containing 88% active ingredients, which is the highest concentration of active ingredients of the most advanced wetting agents available, H₂Flo leads the way in wetting and water conservation products.

Once it's mixed with water, H₂Flo reduces its surface tension, allowing water to penetrate the soil by freely spreading across the soil particles. It promotes both vertical and horizontal movement of the water, especially in sandy soils. This leads to a better-developed root system and thus to a better absorption of nutrients, while the amount of water can be considerably reduced.

Application rate

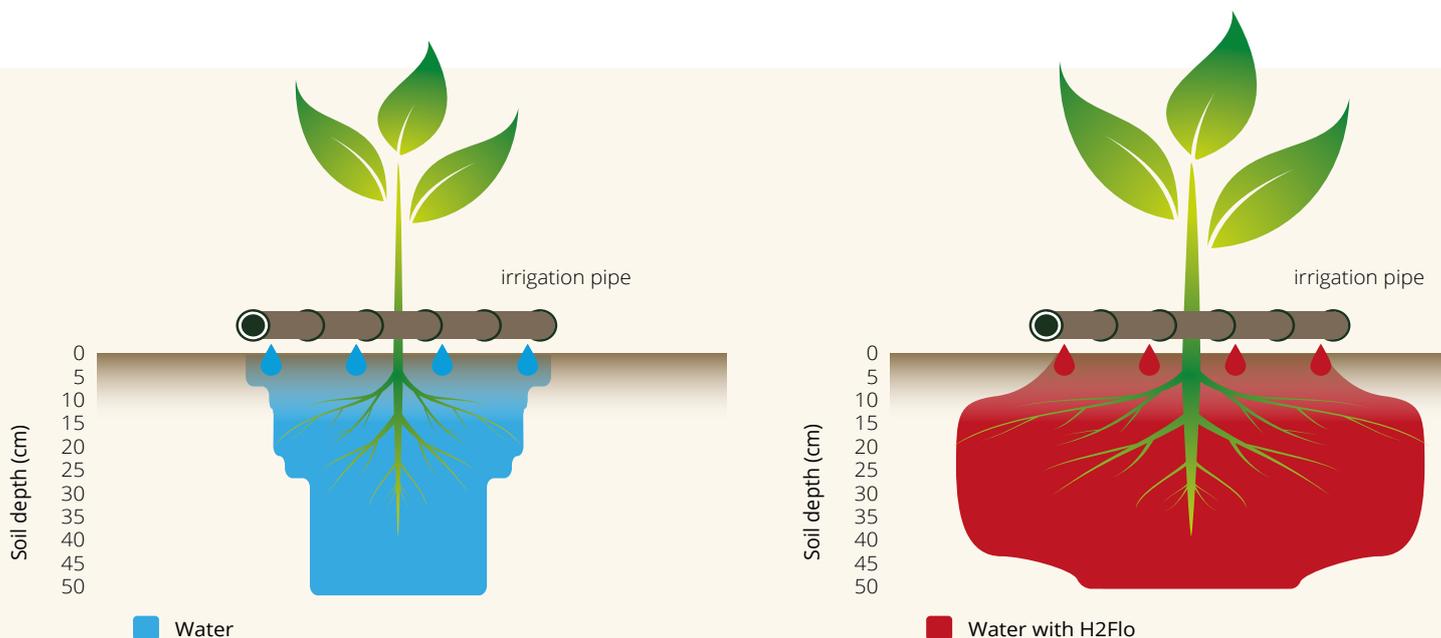
Timing	H ₂ Flo rate
Pre planting / Wetting up of growing media	1.2 - 2.4 liter/ha
Initial application in crop	1.2 - 2.4 liter/ha
Monthly in crop	0.6 - 1.2 liter/ha

H₂Flo can be applied all year round, by drip, center pivot and overhead irrigation. Best performance in light-sandy soils containing >1.5% organic matter. (If applied via a boom sprayer please consult your local ICL Specialty Fertilizers adviser or dealer).

Benefits of H₂Flo

- 1 Water savings; H₂Flo significantly reduces irrigation requirements, up to 25%*
- 2 Can be used in conjunction with fertilizers
- 3 It's quickly absorbed by all type of growing media, especially substrates
- 4 Is effective through the substrate and not just at the surface
- 5 Excellent horizontal and vertical spreading and penetration characteristics
- 6 Flexible application programs and flexible water rates

**Proven in official trial stations*



Trial case

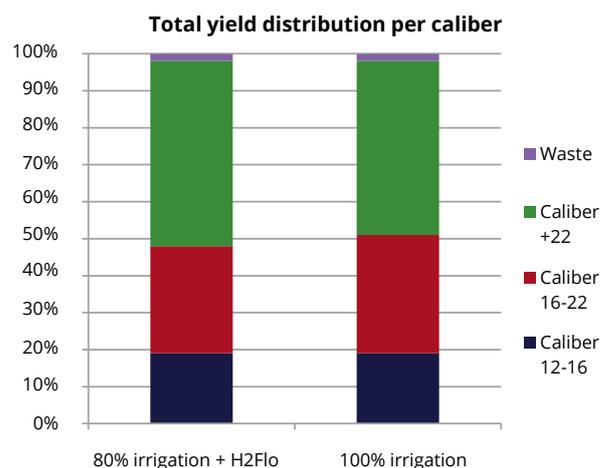
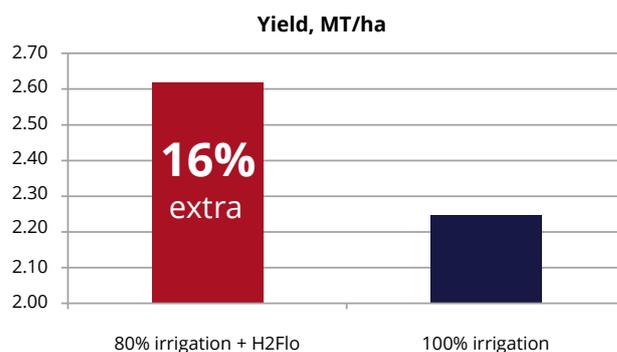
Trial set-up

Objective:	Demonstrate that applying H ₂ Flo will result in a reduction in irrigation volume while maintaining or increasing yield.
Location:	Official trial station, France
Crop:	Asparagus, variety Grolim – white
Application method:	Irrigation
Soil type:	Sandy soil
Assessments:	Total Yield

Treatments

Grower practice	H ₂ Flo
The water was supplied via irrigation system without the usage of any water conservation agents.	The addition of H ₂ Flo in the irrigation system was done once a week, from June till October.
Treatment 100% irrigation	Treatment 80% irrigation + H ₂ Flo
	Dosage of H₂Flo 1.2 ltr/ha with first irrigation and 0.15 ltr/ha for weekly application in the period mentioned above.

Economic evaluation	80% irrigation + H ₂ Flo	100% irrigation
Marketable yield, MT/ha	2.62	2.25
Gross income, €/ha	17,270	14,792
Extra cost of ICL treatment (vs. grower practice), €/ha	65	
Extra income/ha (vs. 100 % irrigation), €/ha	2,413	



Conclusions

- By using H₂Flo, the yield increased up to 16% compared to grower practice (100% irrigation) and reduced irrigation water by 20%
- The total yield increased, especially in the 22+ caliber
- H₂Flo provided an extra income of 2,413 €/ha, compared to normal grower practice (100% irrigation), achieved only from extra yield. Reduced costs of less irrigation water, pump costs etc., are not included.

Attention:

Store the product in a cool, dry and ventilated place.

As circumstances can differ and as application of products is beyond our control, ICL Specialty Fertilizers cannot be held responsible for any negative results. With this publication, all previous given recommendations expire.

Before a new rate, product or application method is used, a small-scale trial is recommended.

H₂Flo is biodegradable and is not hazardous to the environment.

Ask your local ICL Specialty Fertilizers dealer or the ICL Specialty Fertilizers representative in your country for more information or recommendations. Consult www.icl-sf.com for your contact in the region.

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