

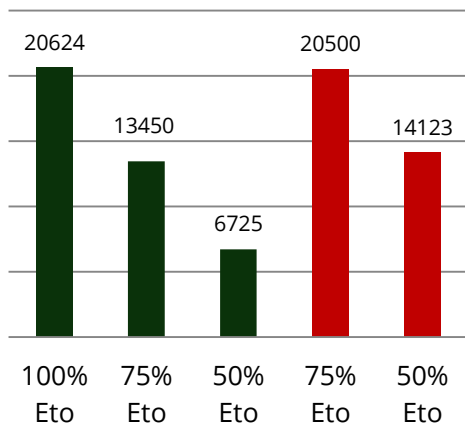
# Trial Information

# H<sub>2</sub>Flo™

## TOMATO



### Fruit weight Total (kg/ha)



Control  
H<sub>2</sub>Flo

**H<sub>2</sub>Flo** is a unique blend of surfactants especially designed to move water and fertilizers quickly and efficiently through different types of soil. The advances made in surfactant technology mean that this product leads the way in water conservation and provides growers and farmers with the most advanced wetting agents available. The product can be applied as an initial wetter and also during the normal irrigation cycle where it will also aid the movement of fertilizers throughout the soil therefore balancing the EC levels. H<sub>2</sub>Flo also prevents the hardening of water repellent deposits. H<sub>2</sub>Flo contains a root hair activator that helps produce stronger roots and aids plant establishment.

#### Trial set-up

##### Objective:

Demonstrate that applying H<sub>2</sub>FLO will result in a reduction in irrigation volume while maintaining or increasing yield.

##### When:

Spring 2014

##### Where:

Florida, USA

##### Crop:

Tomato (Charger variety), 12 weeks growing season

##### Application

##### method:

Tomato plants in single rows. One drip tape per plot. Randomized complete block with 4 replications, 12 meter long rows with 40 plants/plot.

##### Measurements:

Soil volumetric water content (VWC) readings at 15cm deep on bed centres and 15cm from the west edge (50 observations during the season)  
Plant height (3 weeks after transplanting [WAT])  
Foliar dry biomass per plant (3 and 15 WAT; 5 plants/plot)  
Marketable yields (10 and 12 WAT).

## Conclusions

- Positive return of investment of **€390 euro per Ha** in energy savings from 25% less irrigation.
- Yield maintained with 25% water saving, 1M L/Ha water saved
- Plots treated with H<sub>2</sub>Flo at the 50% ETO level increased yield over 100%



## Fertilizers plan:

\* During growth period Boron and Mn were applied by foliar fertilization

\* Both treatments received the same nutrition programme

## Treatments

**Farm Practice:** No usage of water conservation/ surfactants. 3 irrigation programs (100%, 75% and 50% ETo)

**ICL trial area:** 5 applications of H<sub>2</sub>FLO:  
Total of 3.6 l/ha of H<sub>2</sub>FLO: 1.2 litre H<sub>2</sub>Flo/ha (0 WAT)  
0.6 litre H<sub>2</sub>Flo/ha in weeks 1, 3, 5 and 7

| Economic evaluation   | Grower practice | ICL fertilizer plan |
|---|-----------------|---------------------|
| Water volume liter/ha/season                                | 4.380.000       | 3.285.000           |
| Cost of irrigation (including energy, labor, water) €/liter | 0.0003          | 0.0003              |
| Extra cost of H <sub>2</sub> Flo treatment per season       | -               | € 72                |
| Return on Investment/ha                                     | € 390           |                     |

## Why H<sub>2</sub>Flo performs better?

- H<sub>2</sub>Flo enhanced both lateral and vertical movement of water into the soil, stimulating the root system to use the nutrients efficiently
- Because Tomato crop requires high amount of water per season, especially in critical stages, the water often run off the soil. H<sub>2</sub>Flo lowers the surface tension of the water allowing it to penetrate the soil by freely spreading across the soil particles
- With same amount of water and nutrients the use of H<sub>2</sub>Flo results in a more effective uptake of both, water and nutrients

### 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](http://www.icl-sf.com) for your contact in the region.

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