

EVALUATION OF RESPONSE OF STRAWBERRY GENOTYPES TO A REDUCED WATER IRRIGATION TRIAL IN THE SOUTH OF SPAIN

1BIONEST S.A.T. - Almonte (Huelva) España

2Department of Agricultural, Food and Environmental Sciences, Università Politecnica delle Marche, via Brecce Bianche 10, 60121, Ancona, Italy.

ABSTRACT

In the overview of European production, Spain is classified as the first supplier with 360,416 tonnes/year, and in sixth position among the top 10 producers in the world.

The Huelva region in Spain (southwestern coast of Spain) has conquered the primacy of Spanish strawberries production. Giving the extended cultivation area, the optimization of water use and an accurate irrigation management for strawberry grow through agricultural strategies that find a compromise between production, quality and the environment is a primary target for the farmers of this region.

The aim of this work is to assess the effect of variation of water supply on strawberry production during crop cycle. Nine selections originating from D3A-UPM breeding program and "Rociera", a commercial variety widely cultivated in Spain, are compared to identify their yield and quality response to limited water condition. All genotypes were compared by testing the standard water regime W100 (100% water restitution), with an irrigation volume of 5 l/h, with treatments W72 at 72% of water restitution (providing 3.6 l/h) and W50 (50% of water restitution, 2.5 l/h).



The first result of the study demonstrated that the W72 treatment tested in this trial resulted much more appropriate for the cultivation of **"Rociera"**, by **promoting the 32% increase of plant yield.**



This benefit combined with the save of water use and labor work for irrigation returns with a high economic benefit for the company at **a reduced environmental impact.**



The positive impact of the 28% reduction of water use (W72) was detect also for the breeding selections; some of them, showed a plant vegetative and yield performances near to "Rociera". As expected, the different breeding selections showed a wide variability in response to the irrigation treatments.

