

Dear Dr. Valdez-Aguilar,

You are herewith invited to review a manuscript for *Acta Physiologiae Plantarum*.

I would be grateful if you would review a paper entitled "Photosynthetic stomatal parameters and cut-flower yield of *Rosa* cv. Eurored are adversely affected by mild water stress irrespective of the substrate composition." for this journal.

This is the abstract:

The aim of the present study was to provide a better insight into the adaptive processes within *Rosa* hybrid plants cv. Eurored grown in soilless cultivation in a greenhouse when exposed to water deficit since studies on roses have been limited. Rose plants were grown under three different substrates cultivation (perlite, pine bark-almond shells 1:1, and perlite-pomice 1:1) and two water regimes (100% and 67% of the irrigation needs). Photosynthetic parameters, water relations, leaf chlorophyll content, chlorophyll fluorescence and flower stem production were determined. The results of this work indicate that the mild water stress leads to a) a negative effect on the photosynthetic rate and stomatal conductance although there was no reduction on the intercellular CO₂, b) a decline of leaf chlorophyll and chlorophyll fluorescence, c) a decrease on the transpiration rate, leaf water potential (LWP) and relative water content (RWC) however the water use efficiency (WUE) has been shown to be increased, d) a reduction on the total production of flower stems, however, the number of extra quality flower stems was not affected. Substrates did not affect any physiological or biochemical or growth parameters. Summarizing the reduction in photosynthetic rate without being followed by any change in the intercellular CO₂ concentration was linked to a combination of stomatal and non-stomatal factors, such as water imbalance which can increase the mesophyll resistance and subsequent reduction in carboxylation efficiency. As a consequence, the limited supply of the metabolic energy in the plant tissues restricted plant growth.

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Your password is: valdez-agu

The manuscript reference is ACPP-D-08-00292.

If possible, I would appreciate receiving your review in 21 days. You may submit your comments online at the above URL. There you will find spaces for confidential comments to the editor, comments for the author and a report form to be completed.

With kind regards

Janusz Zwiazek
Associate Editor