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Impact of treated waste water on the biochemical quality of medicinal plant parsley *Petroselinum crispum* in the region of Annaba (East-Algerian)

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The reusability of treated wastewater in agriculture is a very common practice worldwide. Such action in this particular vegetable agriculture is not trivial. Indeed, the treated water can carry pollutants that cause chemical and biological contamination which the cultures, soil and consumers revelations. A test on parsley *Petroselinum crispum* was led in order to check the effects of worn water on some physiological and biochemical parameters. Two treatments were chosen, irrigation by worn water, compared to a check. A physicochemical analysis of the following parameters: pH, electrical conductivity, DBO5, DCO, nitrate, nitrite, and orthophosphate were conducted. The tests concerned the chlorophyll content, soluble sugar and proline. As far as the obtained results are concerned, the total chlorophyll content has been superior in the treated plants. This shows the ability of plants to react favorably under worn water irrigation. The soluble sugars were often taken as reference's tolerance to abiotic stress, were accumulated more than at leaves and roots level of the treated plants. The content of proline at the leaves and roots of the treated varieties were superior to check, leading to the probable explanation that there is an ability of the cultivars to sustain abiotic conditions. Even though the results that have been obtained are somewhat positive in the expression of the varieties, awareness has to be considered. Numerous studies and experiments have permitted these last decades, to establish standards more and more precise when it comes to deal with worn water in agriculture purpose.

Biography

Fatiha Bekouche is currently a Professor in Plant Biology (Eco-Toxicology) at Badji Mokhtar Annaba University. Her scientific interest is in the area of physicochemical and microbiological analysis of treated wastewater and its impact on physiology and biochemistry and plants.

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