

Vol. 9 (4): 691-698 (2019)

## THE EFFECT OF WATER STRESS ON PHOSPHATIDYLCHOLINE COMPOSITION IN DURUM WHEAT LEAVES

BOUHOUHOU Mouloud<sup>1\*</sup>, BENSARI Mourad<sup>2</sup>

<sup>1</sup>*M. Bouhouhou, ENS Assia DJebar, Constantine, Algeria;*

<sup>2</sup>*M. Bensari, Mentouri University, Constantine, Algeria;*

\*Corresponding author BOUHOUHOU Mouloud, e-mail: [bouhouhoumouloud@gmail.com](mailto:bouhouhoumouloud@gmail.com);

Received June 2019; Accepted August 2019; Published October 2019;

DOI: <https://doi.org/10.31407/ijeess9414>

### ABSTRACT

Two durum wheat (*Triticum durum* Desf) cultivars, Oued-Zenati 368 (OZ) and Kebir (K), differently sensitive to drought are cultivated under controlled conditions. The PEG is used at the 21<sup>st</sup> day of the plantation in order to obtain a moderate level of water stress (S). At the 28<sup>th</sup> day, the relative water content (RWC) and the leaf phosphatidylcholine (PC) composition were studied in the controlled and stressed plants. The water stress provokes a reduction of RWC in the two cultivars, and the amount of PC increase in OZ and decrease in K. We also examined the composition of fatty acids for this phospholipid, and the changes provoked in the degree of unsaturation (DoU) by the water stress. Our results confirm the settled hypothesis: that we could exploit phosphatidylcholine as biological marker for the screening of the plant genotypes resistant to the drought.

**Keywords:** Degree of unsaturation, fatty acids, phosphatidylcholine, *Triticum durum* Desf, water stress.