International Research Journal of Engineering Science, Technology and Innovation
Vol. 10(3) pp. 1-1, January, 2021
Available online http://www.interesjournals.org/IRJESTI

Editorial

Editorial Note on Biological Agent Modulates the Physiology of Barley

Glory Thomas*

Department of Biotechnology, North-Western University, USA

E-mail: agriscience.7@gmail.com

EDITORIAL

Recognized because the cause of net blotch, *Drechslera teres* is liable for major losses of barley crop yield. The results of this plant disease are thanks to the impact of the infection on the photosynthetic performance of barley leaves. To limit the symptoms of this ascomycete, the utilization of beneficial bacteria referred to as "Plant Growth Promoting Rhizobacteria" constitutes an innovative and environmentally friendly strategy. A bacterium named as strain B25 belonging to the genus Burkholderia showed a robust antifungal activity against *D. teres*. The bacterium was ready to limit the event of the fungus by 95% in detached leaves of bacterized plants compared to the non-bacterized control. during this study, in-depth analyses of the photosynthetic performance of young barley leaves infected with *D. teres* and/or within the presence of the strain B25 were administered both in and shut to the necrotic area. Additionally, gas exchange measurements were performed only near the necrotic area.

The yield losses induced by *D. teres* infection are often explained by a discount in photosynthesis. The main effects caused by the pathogens on the photosynthetic mechanisms of plants include impairment in energy dissipation by chlorophyll (Chl) a fluorescence, reduction in gas exchange rates, increase in foliar temperature and limitation in mesophyll conductance. Chl a fluorescence imaging and measurement combined with gas exchange measurements are key indicators of in place photosynthetic performance of plants. Measuring Chl a fluorescence is non-destructive, non-invasive and a sensitive technique providing information on the physiological condition of infected plants. The variable-to-maximum Chl a fluorescence ratio, also called maximal quantum yield of dark-adapted leaves (Fv/Fm) is on the brink of 0.8 in healthy leaves. Fv/Fm represents also the utmost quantum yield of photosystem II (PSII) photochemistry. to match non-infected with host tissue infected by the pathogen, the parameter Fv/Fm is one among the foremost important parameters. The energy absorbed by PSII are often lost within the photochemical form Y(II) or within the non-photochemical form. The non-photochemically lost energy is itself divided into two pathways referred to as the yield induced by regulated non-photochemical energy loss (Y(NPQ)) and therefore the yield for other energy losses (Y(NO)). Furthermore, the presence of chlorotic and necrotic areas cause a decrease within the photosynthetic production of assimilates. The negative effects of pathogens on photosynthetic parameters in several plants are described in many reports.