Acta Scientific AGRICULTURE (ISSN: 2581-365X)

Volume 5 Issue 8 August 2021

Short Communication

Impact of Fungi on Food Crops and Interactions with the Environment

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Received: April 19, 2021

Published: July 21, 2021

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Scientists and researchers in the developing countries should have a special focus on fungal diseases. Annually, fungal pathogens destroying the crops very heavily, which caused heavy economic loss and as well as effect the supply of the food. The most dreadful pathogenic fungus are *Puccinia* spp., destroying the wheat, *Magnaporthe oryzae*, infecting rice and wheat, *Botrytis cinerea*, which has wide range of host. Several crops growing in the tropic areas, such as mango, guava, bananas, coffee, cacao, and few nuts. These crops are affecting by fungal infections. Mostly these crops are not growing in colder climates. Due to lack of natural defence, to grow crops in tropical climate always at high risk of epidemic. This problematic situation required to develop sustainable and effective approach. Some times fungus cause infections to invertebrate hosts, which create ecological imbalance, which may lead to agricultural crises. Global warming opens a Pandora box for fungal diseases. Some thermally intolerant fungi with current pathogenic potential acquire the ability to survive at mammalian temperatures. Since then, many interdisciplinary studies, from distinct research groups, revealed breath-taking and controversial data regarding the pathogenesis, evolution, ecology of fungus and disease control strategies. In this Research Topic, we discussed the impact of fungus on food crops and interaction of fungus with environment could lead to bio-control approaches.

(Zeilinger., *et al*. 2016) [1] reported that It is crucial to foreground that most of the plant-fungal interactions are useful to both plants and fungi, with this symbiotic interaction improving plant growth, development, foraging, acquisition of soil resources, and tolerance to stress.

(Benítez., *et al*. 2004) [2] the utilization of *Trichoderma hamatum* or *Trichoderma koningii* to the growing fields can enhance crop yield up to 300%. *Trichoderma* induces biofertilization of crops.

(Qualhato., *et al*. 2013) [3] Reported that fungal species attack on one another and *Trichoderma* spp. also acts in the mycoparasitism. (Zeilinger and Omann 2007) [4] reported that *Trichoderma* spp act as antagonistic agent against important phytopathogenic fungi such as *Fusarium* spp., *Rhizoctonia solani*, *Sclerotium rolfsii*, *Sclerotinia sclerotiorum*, *B. cinerea*, and *Pythium* spp., which could be a potential biological control agent. Thus, mycoparasitism-based approach could reduce the utilization of agro-chemicals and antifungals in crop cultivation. In this sense, a better understanding of the fungal diversity and its impact on plant-fungal interactions would be highly beneficial to improve plant pathogen control.

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