World Academy of Science, Engineering and Technology
International Journal of Biological and Ecological Engineering
Vol:16, No:01, 2022

Biodiversity of Pathogenic and Toxigenic Fungi Associated with Maize Grains Sampled across Egypt

Authors : Yasser Shabana, Khaled Ghoneem, Nehal Arafat, Younes Rashad, Dalia Aseel, Bruce Fitt, Aiming Qi, Benjamine Richard

Abstract : Providing food for more than 100 million people is one of Egypt's main challenges facing development. The overall goal is to formulate strategies to enhance food security in light of population growth. Two hundred samples of maize grains from 25 governates were collected. For the detection of seed-borne fungi, the deep-freezing blotter method (DFB) and washing method (ISTA 1999) were used. A total of 41 fungal species was recovered from maize seed samples. Weather data from 30 stations scattered all over Egypt and covering the major maize growing areas were obtained. Canonical correspondence analysis of data for the obtained fungal genera with temperature, relative humidity, precipitation, wind speed, or solar radiation revealed that relative humidity, temperature and wind speed were the most influential weather variables.

Keywords : biodiversity, climate change, maize, seed-borne fungi
Conference Title : ICPPDIS 2022 : International Conference on Plant Pathology, Diseases and Immune System
Conference Location : Singapore, Singapore
Conference Dates : January 07-08, 2022