World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Histopathological Features of Infections Caused by Fusarium equiseti (Mart.) Sacc. in Onion Plants from Kebbi State, Northern Nigeria

Authors : Wadzani Dauda Palnam, Alao S. Emmanuel Laykay, Afiniki Bawa Zarafi, Olufunmilola Alabi, Dora N. Iortsuun

Abstract : Onion production is affected by several diseases including fusariosis. Study was conducted to investigate the histopathological features of different onion tissues infected with Fusarium equiseti by inoculation with soil drench, root dip and mycelia paste methods. This was carried out by fixation, dehydration, clearing, wax embedding, sectioning, staining and mounting of leaf and root sections for microscopical examination at 400x. Once infection occurred in the roots, the pathogen moved through the vascular system to colonize the whole plant. At first, it grew in the intercellular spaces of the root cortex but soon invaded the cells, followed by colonization of the cells by its hyphae and microconidia. At later stages of infection, the cortex tissue became completely disorganized and decomposed as the pathogen advance to the shoot system via the vessel elements; this may be responsible for the early wilting symptom of infected plants arising from the severe water stress due to blockage of the xylem tissues.

Keywords : onion, histopathology, infection, fusaria, inoculation
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020