

Study of Some Epidemiological Factors Influencing the Disease Incidence in Chickpea (*Cicer Arietinum* L.)

Authors : Muhammad Asim Nazir

Abstract : The investigations reported in this manuscript were carried on the screening of one hundred and seventy-eight chickpea germplasm lines/cultivars against wilt disease, caused by *Fusarium oxysporum* f. sp. *ciceris*. The screening was conducted in vivo (field) conditions. The field screening was accompanied with the study of some epidemiological factors affecting the occurrence and severity of the disease. Among the epidemiological factors maximum temperature range (28-40°C), minimum temperature range (12-24°C), relative humidity (19-44%), soil temperature (26-41°C) and soil moisture range (19-34°C) was studied for affecting the disease incidence/severity. The results revealed that air temperature was positively correlated with diseases. Soil temperature data revealed that in all cultivars disease incidence was maximum as 39°C. Most of the plants show 40-50% disease incidence. Disease incidence decreased at 33.5°C. The result of correlation of relative humidity of air and wilt incidence revealed that all cultivars/lines were negatively correlated with relative humidity. With increasing relative humidity wilt incidence decreased and vice versa.

Keywords : chickpea, epidemiological, screening, disease

Conference Title : ICAFE 2015 : International Conference on Agricultural and Food Engineering

Conference Location : Miami, United States

Conference Dates : March 09-10, 2015