

RESPONSE OF SOME IMPORTED POTATO CULTIVARS TO INFECTION BY *POTATO VIRUS Y* (PVY) UNDER FIELD CONDITIONS.

**Mustafa A. Adhab Rakib A. Al-Ani Farah A. AbdulJabbar Oadi N.I. Matny Saad
T. Abdulmalek Ammar A. Aish Qassim H. Ahmed**

***Plant Protection Dept., College of Agriculture, University of Baghdad**

Email: maa_adhab@hotmail.com

ABSTRACT

This experiment was conducted in the field of plant protection department, College of Agriculture, University of Baghdad, to evaluate the response of potato cultivars, AR99, Arizona, Monaco, Avalon, Ambition, Disserie, Rudolph, Savanna, Saviola, Sinora, and Manitou to infection by *Potato virus Y* (PVY). The virus was isolated from infected potato plants and identified by means of symptoms on indicator plants sap inoculated by the virus, serological immunostrip reaction, and transmission by aphids *Myzus persicae*. Results showed that the virus induced chlorotic local lesions on inoculated leaves of *Chenopodium amaranticolor*, mild mottle followed by leaf necrosis and dropping on potato *Solanum tuberosum*. *Nicotiana tabacum* Samsun, *Nicotiana glutinosa* developed vein clearing followed by mild mottle on the new leaves. Mild mottle was developed on tomato leaves which disappeared within few days. Positive reaction on immunostrip containing PVY-polyclonal antibodies with extracts from infected plants was detected. No reaction was observed with extracts from healthy plants. Results of susceptibility of potato cultivars, exposed to natural PVY-infection by *Myzus persicae* from infected potato plants placed at different sites of the field, showed that two cultivars, Disserie and Rudolph were susceptible to PVY as proved by symptoms developed on these cultivars and test plants and positively reacted with PVY-polyclonal antibodies on immunostrip. The cultivars, AR99, Arizona, Monaco, Avalon, Ambition, Savanna, Saviola, Sinora, and Manitou were found to be resistant as proved by no symptoms were developed on these cultivars in the field and on test plants sap inoculated by extracts from these cultivars as well as no virus was detected in these cultivars by serological immunostrip.

Key words: Potato Virus Y, Potato cultivars, Immunostrips, Resistant cultivars.