E Al-Ali et al., J Stem Cell Res Ther 2016, 6:4(Suppl)
http://dx.doi.org/10.4172/2157-7633.C1.017

Genetic identification of Tomato Yellow Leaf Curl Virus (TYLCV) infecting tomato crops in Kuwait

E Al-Ali, H Al-Hashash, H Al-Aqeel, A Ben Hejji and **N Al-Shayji**
Kuwait Institute for Scientific Research, Kuwait

TYLCV was reported as a major pest of tomato but it was not fully characterized at the molecular level. In addition to TYLCV, tomato may be susceptible to over 40 other viruses transmitted by whiteflies. The high economic losses induced by whitefly-transmitted viruses in Kuwait necessitates a rapid action for identification and molecular characterization of the virus species present in Kuwait in order to develop and recommend appropriate control strategies. Tomato leaf samples were collected on monthly bases from October 2014 till January 2015. Collections were made from greenhouses farms in Wafra and Abdally. Gemini viral DNA was extracted from 200 collected infected tomato leaf samples using Dellapotra method. Then, PCR protocol was optimized and used on 50 collected infected leaf tomato samples by using two different primers. Field observations carried out in this project for the period between October 2014 and January 2015 of tomato grown under protection and in open-fields indicated that the symptoms such as leaf yellowing, leaf cupping, leaf curling, stunting of plants, were common. Whitefly infestation was very common. Data from this activity showed that TY1(+) &TY2(-) primers were successful in detecting the TYLCV in samples collected in January, and partially sequencing of the positive TYLCV done and the amplicon showed a new spp of TYLCV was detected. These data indicate that the TYLCV present in Kuwait belongs to a separate species from those reported in other countries, and hence, has been named tomato yellow leaf curl Kuwait virus (TYLCKWV).

Biography

E Al-Ali obtained her BSC in 1993 from Kuwait University Worked for Kuwait University as Research Assistant, then joined KISR on October 5, 1993 and led 5 projects. She has published more than 5 papers in reputed journals and international conferences. Her field of experience, in plant virus detection, primer design, cloning and sequencing, ELISA, DNA Extraction, PCR Amplification, RCA Rolling Circle Amplification, TYLCV detection on tomatoes, also trained twice in the University of Wisconsin Madison under the supervision of Prof. Amy Charkowski., as well as University of Washington state under supervision of Pro.Hanu Pappu.

ebtisam_alali@hotmail.com

Notes: