Abstract

The responses of two locally adapted okra varieties (Bokungi and Ikeregi) to Cucumber mosaic virus (CMV) were evaluated under field conditions during the 2014 cropping season. Seedlings were inoculated with the virus at 1 week after emergence. Each genotype was evaluated as inoculated and uninoculated treatments. Disease incidence, severity of infection (scale 1 – 5), yield and yield related parameters were measured. Virus titre was quantified using Enzyme-Linked Immunosorbent Assay (ELISA). Data were subjected to independent *t* test and significance was determined at 5 % level of probability. One hundred percent infection was found in both varieties but disease severity was higher in "Bokungi" (5) than in "Ikeregi" (3). Higher virus concentration was found in the inoculated leaves of "Bokungi"(ELISA value = 0.89) compared to "Ikeregi" (ELISA value = 0.41). Reductions in plant height (8.8 %), fruit number (33.3 %) and fruit weight (37.6 %) were significantly lower in "Ikeregi" than "Bokungi". The present data reveal that both okra varieties are susceptible to CMV infection but "Ikeregi" appears to be more tolerant. Cultivation of the more CMV-tolerant okra variety would offer some level of insurance against complete crop failure in case of disease outbreak in the study area.

Keywords: *Cucumber mosaic virus*, disease severity, resistance, yield, okra