

INVESTIGATION OF LEAF CURL SYNDROME IN BITTER GOURD (*Momordica charantia*)

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In the recent past a new disease condition was reported in bitter gourds in many areas of Sri Lanka. This study was conducted to study the development of symptoms and cause of this syndrome. Diseased plants collected from Naachaduwa area were maintained in a plant house at Horticultural Crop Research Institute, Gannoruwa. Diseased plants were checked for already identified viruses of cucurbits in Sri Lanka using ELISA, but such no viruses were detected. Initial symptoms appeared on tender leaf of seedling showed small yellow spots, diffuse veinal yellowing. Next newly developing leaves showed cupped shaped appearance curling upwards and mid-vein portions of leaves were mottled. Some plants were showed severe stunting and leaf curling. Inter-nodal length of plants drastically reduced resulting very dwarfed vines. Flowers and fruits were small and abnormally developed. Symptoms were indicative of a virus infection. Studies were conducted to detect the mode of transmission. Seeds collected from diseased plants which were then planted and kept in insect proof cages did not develop the disease. Grinded leaves from diseased plants were mechanically rubbed on healthy leaves, cell sap from the diseased plants were injected to healthy seedlings were carried out to test possibility of mechanical transmission. None of the plant developed the disease. Diseased plants were given to acquisition feeding by whiteflies (*Bemisia tabaci*) and they were transferred to healthy seedlings. Results revealed that the virus was able to be transmitted by whiteflies. The symptoms of new viral disease in bitter gourd were found to be very similar to Squash leaf curl virus disease in other cucurbits in other countries.

Key words: Syndrome, Squash leaf curl virus, ELISA, Bitter gourd, Whitefly
(*Bemisia tabaci*)