

## **Identification and Disease Assessment of Begomovirus Infecting *Capsicum frutescens* (Kochchi) in Minuwangoda, Sri Lanka**

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Leaf curl of *Capsicum frutescens* (Kochchi) is a common problem in many *Capsicum* growing regions of the country including Minuwangoda area in Gampaha. Water stress, poor soil drainage or viral infection are some of the potential causes of leaf curl. The main aim of the current study was to determine whether the leaf curl of Minuwangoda area is due to viral infection and to determine the disease severity and incidence of the region. A disease assessment key graded from 0 to 6 was developed for CLC disease of *C. frutescens*. Thirtytwo *C. frutescens* fields having more than 50 plants per field were selected. Disease symptoms, incidence and severity were recorded. Prominent symptoms of the disease were leaf curling, vein yellowing and leaf yellowing followed by severe chlorosis and stunting as the disease progressed. These symptoms were similar to the viral infection. The disease incidence varied from 0 to 100% in the selected fields and 71.88% of the fields in Minuwangoda area were affected. Disease severity in the selected fields ranged from 0 to 6, while the average disease severity of the fields in the area was 1.3. To determine whether the causal agent is a commonly reported virus of the family Begomoviridae, coat protein (CP) gene was amplified from the DNA extracted from infected leaves using CP specific primers and the sequencing was done using the Sanger sequencing method. Sequence alignment with the NCBI database showed a 95% similarity to Chilli leaf curl virus (Begomoviridae) isolate CL-14 from Nochchiyagama. Results indicates that Sri Lankan *C. frutescens* cultivation could be challenged by the viral infection and control measures should be implemented as soon as possible.

Keywords: Begomovirus, *Capsicum frutescens*, coat protein (CP) gene, Leaf curl disease

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