

Determination of Leaf Spot Disease Incidence and Severity of a Cinnamon Collection for Two Consecutive Years

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Leaf spot disease (LSD) is considered to be a major disease of cinnamon (*Cinnamomum verum* J. Presl). Comprehensive information on temporal variation of LSD is not available in Sri Lanka. A collection of forty cinnamon accessions, established at Faculty of Agriculture, University of Ruhuna (UoR) from six major cinnamon growing areas was used to determine the temporal variation of above disease incidence (LSDI) during September, 2018 and December 2019, disease severity (LSDS) and correlation between selected morphological characters and LSDI. Using a disease assessment key, developed by Azad *et al* in 2019, the LSDS was determined during 2019. The selected morphological characters of tree height (Th), leaf length (LL), leaf width (LW), leaf length-width ratio (Ll/Lw) and petiole length (Pl), bark thickness (Bth), trunk circumference (Tc) and twig diameter (Twd) were recorded following the Descriptors for Cinnamon (*Cinnamomum verum*) (Team of TURIS 2013 Project, 2016). All accessions reported 50 - 100% of LSDI in both years. Mean LSDI (76.97) was low during 2018 with average monthly rainfall (MRF) of 95.62 mm in contrast to that of 2019 (87.42) with 189.4 mm of MRF, according to the Paired T test. Average values of LSDS of accessions collected from Matara, Galle, Kalutara, Kurunegala, Ratnapura and Hambantota in the established collection at UoR were 4.08, 3.30, 3.74, 2.00, 2.67 and 3.50 respectively during 2019. Above values were different from those during the collection period of June, 2014 to April, 2015 (as 4.50, 4.82, 4.74, 4.60, 3.65 and 3.91 respectively). The accessions were grouped into 3 clusters based on selected morphological characters at rescaled distance of 60.25 in the cluster analysis. Morphological characters of the accessions did not correlate with the LSDI. Above results indicate that LSDS is variable among accessions. There is a temporal variation of LSDI among accessions in the tested location.

Keywords: *Cinnamomum verum* collection, Leaf spot disease incidence, Leaf spot disease severity, Temporal variation