

## MORPHOLOGICAL CHARACTERIZATION OF COMMON BEAN RUST STRAINS IN SELECTED BEAN GROWING AREAS IN SRI LANKA

H.M.I.M.Wijerathna<sup>1</sup>, H.M.P.S.Kumari<sup>2</sup> and M.C.M.Zakeel<sup>1</sup>

<sup>1</sup>*Department of Plant Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Puliyankulama, Anuradhapura*

<sup>2</sup>*Biotechnology Division, Horticultural Crop Research and Development Institute, Gannoruwa, Peradeniya*

Common bean rust (*Uromyces appendiculatus*) is one of the most devastating diseases that affect Sri Lankan bean cultivation. Breeding for rust resistant beans is the most successful and profitable measure to prevent this disease. It is therefore necessary to identify the characteristics of *U. appendiculatus* and its prevalent strains since limited information is available in Sri Lanka. The present study was conducted in two potential bean growing areas in Sri Lanka; Bandarawela and Gannoruwa, where the common bean rust is highly prominent. Eleven infected leaf samples from Bandarawela and 18 samples from HORDI fields in Gannoruwa were collected and the morphological characteristics of the uredinia and urediniospores were observed both macroscopically and microscopically. Cluster analysis of morphological data revealed the presence of two distinct clusters. From the morphological data used for the cluster analysis, patch type had the highest contribution to the clustering. Based on the morphological data, two separate isolate types could be identified. One was with a prominent yellow colour halo (Type B) and the other one was without the halo (Type A). *U. appendiculatus* samples with type B patches can be suggested as a separate strain with which the bean plants showed some resistance reactions. In order to confirm the above study, further research should be carried out with the results of the current study as baseline information.

**Keywords:** Common bean, Molecular characterization, Morphological characterization, ITS primers, *Uromyces appendiculatus*