

**INVESTIGATING THE PRESENCE OF *Candidatus*
Liberibacter asiaticus IN *Murraya koenigii* AND *Citrus spp.*
FROM SELECTED AREAS IN SRI LANKA**

A dissertation submitted to the
Faculty of Animal Science and Export Agriculture
Uva Wellassa University
In partial fulfillment of the requirements for the award of
Bachelor of Science in Export Agriculture

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**Export Agriculture Degree Programme
Faculty of Animal Science and Export Agriculture
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2018

ABSTRACT

Citrus Greening (CG) disease is the most detrimental bacterial disease for citrus, caused by *Candidatus Liberibacter asiaticus* (CLAs). In Asia, CG is mainly transmitted by Asian Citrus Psyllid which is recognized as a major pest in *Murraya koenigii* (curry leaves). This study was employed to investigate the presence of CLAs in *Murraya koenigii* and *Citrus spp.* in some selected locations where fresh curry leaves are harvested for exporting. Leaf samples of curry leaves and *Citrus spp.* were collected from Anuradhapura, Puttalam and Badulla areas. The presence of CLAs in leaf samples were identified by amplification of 1160 bp fragment of 16s rRNA coding gene of CLAs by using O11 and OA1 as forward primers and OI2c as common reverse primer and by amplification of 703 bp and 669 bp fragments of rplKAJL-rpoBC operon gene of CLAs using forward primer A2 and reverse primer J5. All the tested Curry leaf samples from all locations did not produce any amplicon indicating zero presence of CLAs, while Citrus leaf samples produced amplicons in all three areas indicating the presence of CLAs. Citrus in Anuradhapura area displayed the lowest percentage (40%) of amplicon, while the highest percentage of 80 was observed from Badulla area. Citrus in Puttalam area showed 53% presence of amplicons. Results indicate that, within three selected areas, CLAs is totally absent in curry leaves, while CLAs presence is detected in *Citrus spp.* in same fields. CG is restricted to *Citrus spp.* in Anuradhapura, Puttalam and Badulla areas and *Murraya koenigii* (curry leaves) is free of CLAs as host. There is a potential to export fresh curry leaves from those areas, due to the absence of CLAs in curry leaves.

Keywords: Citrus Greening, *Candidatus Liberibacter asiaticus*, *Murraya koenigii*