

4.8 A preliminary survey of diseases of some commercially grown foliage plants in selected regions of Sri Lanka.

W. W. Y. Wimalasena, N. Deshappriya
Department of Botany, University of Kelaniya

ABSTRACT

Foliage industry is currently growing in Sri Lanka, supplying rooted plants, stem cuttings and cut leaves for both foreign and local markets. The commercial nurseries for this purpose are mainly established in the Western, Central, Wayamba and Sabaragamuwa provinces. In 2005, the net foreign exchange earnings has been Rs.1.06bn and cut flowers and foliage sector possessed an export share of 0.17% in 2008. However, rejection of products due to pests and diseases is one of the biggest problems associated with this industry. Therefore it is important that these disease problems are studied and control measures developed.

In order to study the disease problems, export oriented foliage nurseries; Lucky growers, Bandara growers and Tropiflora International in the Central province and Aswin Foliage and GreenSac Foliage in Wayamba province were surveyed during October 2008 to April 2009. *Dracena sanderana* varieties, *Dracaena marginata*, *Dracaena thalodius*, *Dracaena conjena*, *Dracaena* “purple queen”, *Cordyline* sp., *Chrysalidocarpus* (cane palm), *Livistonia rotundifolia*, *Calathea insignis*, *Calathea zebrina*, *Calathea roseapecta*, *Codiaeum* sp., *Schefflera* sp., *Miscanthus* sp. (Chinese grass), *Dieffenbachia* sp., *Pothos* sp. were identified as the commonly grown foliage varieties. Diseases prevalent in these varieties were studied in the survey. Leaf spots (74%), tip burns (13%), anthracnose (4%) and stem rots (9%) were observed as the major symptoms in the plant species studied.

For the isolation of pathogenic fungi, 1cm² samples from diseased leaves were surface sterilized with 0.1% mercuric chloride (HgCl₂) and these were cultured on Potato Dextrose Agar (PDA) aseptically and incubated under room temperature (28⁰C). Pure cultures were prepared and isolated fungal pathogens were identified based on colony morphology and reproductive structures using identification keys. Fungal genera isolated and identified from diseased plants collected from the Central province included: *Fusarium* spp. causing symptoms as large necrotic

leaf spots with irregular margins in *D. sanderana* (Gold), localized necrotic spots with smooth margin and yellowish outline in *D. sanderana* (purple compacta), localized small necrotic spots with smooth margin in *D. sanderana* (victory), scattered necrotic spots with irregular margins and yellowish outline and localized necrotic spot in *Cordyline* (red edge) , *Cylindrocarpon sp.* causing localized and scattered necrotic area with irregular margins in *D.sanderana* (white), *Cladosporium sp* causing localized necrotic area with irregular margin in *D.sanderana* (victory) , *Cylindrocladium sp.* causing small localized necrotic spots in *Chrysallidocarpus* (cane palm), *Acremonium sp.* causing scattered necrotic spots in *Miscanthus* (Chinese grass) and two sterile species. Fungal genera isolated and identified from diseased plants collected from the Wayamba province included: *Fusarium sp.* causing tip burn symptom in *Cordyline* (green) , *Fusarium moniliforme* causing localized necrotic spots in *D. sanderana* (white) and *Curvularia sp.* causing leaf spots in *Cordyline* (green).