SEM study of the morphology of leaves of four dessert banana cultivars (Musa spp. cv. 'Intan', 'Jari Buaya', 'Novaria' and 'Raja Udang Merah') in Malaysia

ABSTRACT

The leaf surface morphology of four banana cultivars namely, óIntanô, óNovariaô, óJari Buayaô and óRaja Udang Merahô was studied using the SEM. Stomatal density differed among the cultivars and between the two leaf surfaces. The abaxial surface had 2ï3 fold more stomata/mm2 than the adaxial surface. óJari Buayaô had the highest stomatal density. Wax layer between the two leaf surfaces also differed. The abaxial surface showed more conspicuous and well-organized wax layer. The stomatal complex of both surfaces was located in a slight depression among the epidermal cells but with the stomatal aperture situated slightly higher than the position of the guard cells. The results are discussed in terms of plant water relations and the effectiveness of fungicide sprays to control leaf diseases.

Keyword: Banana; Scanning electron microscopy; Banana cultivars; Morphology