

Resolution of diseased area assessment using 3D and 2D plant images

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Abstract

Assessment of agricultural produce caused by plant diseases, approached technique is crucial and must be effective. The produces naturally showed morphology with arc, convex or flat. The objective of this study is to compare resolution of diseased area assessments. Anthracnose on mango fruits caused by *Colletotrichum gloeosporioides* and on chili fruits caused by *C. capsici* were evaluated using 3-dimension (3D) and 2-dimension (2D) models calculated in the same samples. However, yellow leaf spot diseased area of eucalyptus caused by *Phaeophleospora* spp. was studied as 2D model merely. A 1 cm² grid line on transparent sheet was used for 3D evaluation while Scion image and Photoshop CS3 programs were used for 2D assessment. There were no significant differences of diseased area evaluation between 3D and 2D. So, the 3 methods were effective, reliable and practicable in plant diseased assessment.