

The Structural Resistance of Sweet Potato Leaves to Fungal Pathogen *Sphaceloma batatas*

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Abstract	<p>Anatomical characters can be used as instructions to the structural resistance of plants to pathogen attack. Various pathogens attack sweet potato plants, such as the <i>Sphaceloma batatas</i> fungus that causes scurvy disease (scab). The aims of this research to test the structural resistance of sweet potato plants based on leaf anatomical character and intensity of disease attack due to the inoculated of <i>S. batatas</i>. The research was conducted from June to November 2016, using the Completely Randomized Design Experimental (RAL) method with a factorial pattern. The first factor was ten sweet potato cultivars and the second factor was the inoculum of <i>S. batatas</i> fungus each treatment with five replications. The character of leaf anatomy observed was thick of cuticle, thick of mesophyll, size and number of stomata and number of trichomes per 1 mm² leaf area. Based on the research result, it was concluded that the inoculation of the fungus of <i>S. batatas</i> caused the decrease of stomata length and width on ten sweet potato cultivars. The highest intensity of disease attack was 14.33% and correlated with stomata length ($r = 0.49$). The anatomical structural resistance to scurvy can be used as a basis for determining crosses for obtaining superior sweet potato cultivars. The benefit of the research is to advise the community to cultivate sweet potatoes that have structural resistance to scurvy, such as cuticle and thick mesophyll, high trichomata density.</p>
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