Abstract

Grevillea robusta is a widely grown agroforestry tree and is regarded as a pioneering coloniser of disturbed sites. Our current understanding on changes of species due to disturbance, abiotic conditions and biotic interactions is very minimal. We investigated a leaf-spotting disease and abnormal growths on G. robusta in Yala and Kodera forest plots in Nyanza province, Kenya. The study comprised symptomology, identification of causal pathogens as well as tissue and soil analyses. Phyllosticta spp. and Pestalotia spp. fungi were isolated from the leaf spots. Seedling reinoculation confirmed Phyllosticta spp. as the lesser opportunistic cause of the leaf spot. However, mineral and proteoid root analyses suggested that abiotic and genetic factors were the main causes of the leaf spotting. The Yala forest had lower pH, phosphorus toxicity (> 0.07%) and poor water drainage, while the Kodera forest had generally high manganese toxicities in soil and leaf tissue.