

Effects of *Lantana Camara* and *Psidium Guajava* on the Chemical Properties of the Soil Ngudzeni Area in Swaziland

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Abstract:

This study investigated the effects of *Lantana camara* and *Psidium guajava* which are invasive plants on the native species and chemical properties of the soil at Ngudzeni area in Swaziland. In carrying out this study, guided direct observation was used in the field to ascertain the effects the invasive species had on the native plants. A field survey was undertaken in eight (8) transects and sixteen (16) quadrats, eight (8) in the experimental and eight (8) in the control sites. In each quadrat, the species types were identified and counted to determine their numbers. Soil samples were taken at 15 cm and 30 cm depths. Acid digestion (Aqua Regia method) and analysis using Atomic Absorption Spectrophotometer (AAS) was used to determine the levels of the chemical elements in the soil. The results of this study reveal that the magnitude and direction of the effects varied both within and between the types of the effects. On average, abundance and diversity of the native species decreased in the invaded sites. Furthermore, the analyses of this study reveal that although the presence of the invasive species had negative effects on some of the chemical properties of the soil, in some others still no marked effect was observed. Overall, invasive species effects are heterogeneous and not unidirectional even within particular effects types.

Key words: *Lantana camara*, *Psidium guajava*, Ngudzeni, native species, invasive species, chemical properties of soil