

## **Ground Cover and Surface Biodiversity under Tea, Rubber and Oil Palm Crops at Different Maturity Stages**

**P.M.A.N. Senavirathna<sup>1</sup>, R.C.W.M.R.A. Nugawela<sup>1</sup> and I.R. Palihakkara<sup>2</sup>**

<sup>1</sup>Department of Plantation Management, Faculty of Agriculture and Plantation Management  
Wayamba University of Sri Lanka, Makandura, Gonawila (NWP), 60170, Sri Lanka

<sup>2</sup>Department of Crop Science, Faculty of Agriculture, University of Ruhuna

### **Abstract**

Although it is profitable, there are many views expressed against the cultivation of oil palm by various pressure groups in the country. One such allegation against cultivation of oil palm is the loss of biodiversity leading to soil degradation due to lack of undergrowth. The objective of this study was to identify the surface biodiversity and the ground cover under tea, rubber and oil palm crops at different maturity stages. The study was carried out at Hulandawa Estate, Akuressa (WL2a), Sri Lanka. The quadrat method was used to study the plant species associated in plantation crops on two transact lines. Menhinick's Species Richness Index and Shannon's Diversity Index were used for the Calculation of Ecological Indices. The study revealed that the variability of mean ground cover percentage values among different types of crops studied was considerably less. Further, the spread of ground cover in oil palm and rubber was similar in different transact lines selected for the study. The floral species richness and Shannon's diversity index varied with age of plantations. Species richness and diversity in Fauna were also similar in all crops tested.

**Keywords:** Biodiversity, Ground cover, Menhinick's species richness index, Shannon's diversity index

**\*Corresponding Author:** amilaneranj92@gmail.com