

ABSTRACT

Rubber (*Hevea brasiliensis*) is a leading plantation commodity with high economic value. One of the major challenges in rubber cultivation is weed infestation. This study aims to identify and inventory weed species, analyze their composition, dominance, and variation across rubber plantations of different ages in Afdeling 1 of PTPN IV Kebun Ambalutu. The research was conducted from January to March 2025 using a survey method with a descriptive approach. Sampling was carried out purposively using 1 m × 1 m quadrats in plantations aged 9, 11, and 19 years, each consisting of 3 blocks with 3 plots per block, totaling 27 observation units. Observed variables included weed species, weed dominance, diversity index (H'), similarity index (IS), and evenness index (E).

A total of 32 weed species from 22 families comprising 1,510 individuals were recorded. The dominant species based on Important Value Index (IVI) in the 9-year-old plantation were *D. cordata* (24.88), *O. nodosa* (24.14), and *A. compressus* (20.28); in the 11-year-old plantation: *O. nodosa* (37.32), *P. conjugatum* (12.19), and *A. compressus* (10.90); and in the 19-year-old plantation: *O. nodosa* (51.95). Diversity indices showed moderate diversity in the 9- and 11-year-old plantations ($H' = 1.49$ and 1.19 , respectively) and low diversity in the 19-year-old plantation ($H' = 0.70$). The similarity index was 24.49%, indicating low similarity between communities. Evenness indices were moderate in the 9- and 11-year-old plantations ($E = 0.52$ and 0.42) and low in the 19-year-old plantation ($E = 0.26$).

Keywords: diversity, evenness, plant age, rubber plantation, similarity, weeds.