

ABSTRACT

Soil fertility is the ability of soil to provide nutrients for plants that can support plant growth. Arabica coffee is the main product in Central Aceh and plays an important role as a source of foreign exchange for the country. The main problem in the use of Arabica coffee land is low soil fertility, which limits plant growth. This study aims to determine the status of soil fertility in Arabica coffee plantations in Bintang Subdistrict, Central Aceh Regency. Soil samples were collected from 12 points in 12 different villages, namely Bale Nosar, Bamil Nosar, Bewang, Gegarang, Genuren, Kala Segi, Kuala I, Kuala II, Kelitu, Linung Bulen I, Sintep, and Wihlah Setie. The result show soil characteristics that consist are Cation Exchange Capacity (CEC) ranging 14.79 – 34.84 me/100g with low – high criteria, Base Saturation (BS) values between 3.95 – 7.44% with very low criteria, phosphorus (P_2O_5) content ranging 54.84 – 111.92 mg/100g with high to very high criteria, K_2O content ranging 15.61 – 47.42 mg/100mg with low to high criteria, and Organic-C content ranging 3.15 – 7.35% with high to very high) criteria. The status of the soil fertility in the 12 villages in Bintang Subistrict was low to moderate. The villages of Bewang, Kuala I, and Whilah Setie had low soil fertility. The villages of Bale Nosar, Bamil Nosar, Gegarang, Genuren, Kala Segi, Kuala I, Kelitu, Linung Bulen I, and Sintep had moderate soil fertility.

Keywords: Soil Characteristics, Low Fertility, Coffe Land Plantations