**KAJIAN SIFAT FISIKA TANAH AKIBAT ALIH FUNGSI LAHAN DARI HUTAN SEKUNDER DAN KEBUN KARET *(Havea brasiliensis)* MENJADI KEBUN KOPI ROBUSTA *(Coffea canephora)* DI NAGARI SIBAKUR**

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**STUDY ON SOIL PHYSICAL PROPERTIES DUE TO LAND USE CHANGE FROM SECONDARY FOREST AND RUBBER LAND *(Havea brasiliensis)* INTO ROBUSTA COFFEE *(Coffea canephora)* PLANTATION IN SIBAKUR VILLAGE, SIJUNJUNG REGENCY**

**Abstract**

Land use change from secondary forest and rubber land into Robusta coffee plantation causes changes in the physical properties of the soil. This study was aimed to asses the physical properties of soil due to land conversion from secondary forest and rubber *(Havea brasiliensis)* plantation to Robusta coffee *(Coffea canephora)* plantation. This research used a survey method, soil was sampled by purposive sampling based on land use (Rubber Plantations, Robusta Coffee Plantations converted from Rubber Plantations, Secondary Forest, and Robusta Coffee Plantations converted from Secondary Forest). There were totally 24 soil samples which were derived from 4 types of land use, two depths, and 3 replicates. Parameters measured were soil texture, organic matter, bulk density, total pore space, permeability, and aggregate stability index. Data obtained from laboratory were calculated the average value, tabulated, and then compared to the criteria for the soil physical properties. The results showed that there were some changes in the soil physical properties after the land use change from secondary forest and rubber plantation into Robusta coffee plantation. The soil at the research site had silty clay texture, low to high (1.87-7.43%) organic matter, moderate (0.87-1.17g/cm3) bulk density, moderate (56.03 -66.98%) total pore space, moderate to fast (4.93-24.36 cm/h) soil permeability, and unstable to steady (11.54-78.64%) aggregate stability index. Based on the physical properties of the soil at the research site, it was recommended for farmers to continuosly improve the soil physical properties by converting abandoned secondary forests into Robusta coffee plantation.

*Keyword : land use change, robusta coffea, soil physical properties*