

ANALYSIS OF SOIL QUALITY ON DIFFERENT LAND USE IN BIMOMARTANI VILLAGE, NGEMPLAK DISTRICT, SLEMAN REGENCY

By: Raygisca Hafiz Syah Andin
Supervised by: Dyah Arbiwati

ABSTRACT

Bimomartani Village covers an area of approximately 467 hectares. Most of the land is used for agriculture, consisting of dryland fields and rice fields. The soil type in Bimomartani Village is Regosol soil. Agricultural land has different crop rotation systems, such as dryland fields with monoculture of chili – chili – chili, dryland fields with intercropping rotation of chili – chili – chili with peanuts, rice fields with a rotation of rice – rice – chili, rice fields with a rotation rice – rice – corn, and rice fields with a rotation rice – rice – rice. These different crop rotation systems potentially result in different soil quality. This study aims to determine the Soil Quality Index based on different land uses in Bimomartani Village, specifically on rice fields and dryland with different crop rotations, and to identify the limiting factors of soil quality. This study uses a survey method, with sample points determined by purposive sampling based on land use and crop rotation, resulting in 16 sample points. The analysis of soil quality indicators was evaluated using the soil quality index analysis according to Mausbach & Seybold, modified to fit the results obtained. The Soil Quality Index for rice fields with a rice – rice – chili rotation was 0,521 (moderate), for rice fields with a rice – rice – corn rotation was 0,649 (good), and for rice fields with a rice – rice – rice rotation was 0,658 (good). The dryland with a chili – chili – chili monaculture rotation had a value of 0,435 (moderate), while the dryland with a chili – chili – chili intercropping rotation had a value of 0,483(moderate).

Keywords: soil quality, Regosol, crop rotation, rice fields, dryland