THE EFFECT OF MANGROVE CONSERVATION ON SOME SOIL PHYSICAL AND CHEMICAL PROPERTIES IN THE AGRICULTURAL AREA OF BAROS COASTAL BANTUL

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ABSTRACT

The existence of mangrove ecosystems is very important in coastal resource management, especially in the Baros coastal area. Baros Mangrove conservation background is caused by the agricultural problems on Baros coastal areas. This study aims to determine the effect and effectiveness of mangrove conservation on the physical and chemical properties of agricultural soil in the Baros coastal area, Tirtohargo, Bantul Regency. The research method used was survey method with field observation analysis. Determination of sample points in the field at a distance near the beach (100 m), the middle (200 m), and the farthest (300 m) from the location where there are mangroves and non mangroves. Laboratory analysis includes soil texture, bulk density, particle density, porosity, pH, salinity, P-available, K-available, and Na exchangeable. The results showed that the parameters affected by the presence of mangroves are soil texture, salinity, and pH. The soil texture obtained is loam, clay, clay loam, silty clay loam, and sandy clay loam. Soil salinity in locations where there are mangroves, the farther the distance from the coast the lower the salinity, the salinity value in non mangrove locations has a higher value ranging from 0.33ds/m-0.45ds/m and in locations where there are mangroves have lower salinity values ranging from 0.15ds/m-0.35ds/m. The highest value at a distance of 100 m from non mangroves and the lowest value at a distance of 300 m from mangroves. Soil pH in non mangrove areas ranged from 6.89-7.23 higher than mangrove areas ranging from 6.54-6.92. In the soil pH parameter in the mangrove area, the farther the distance from the coast the higher the pH value. In the parameters of bulk density, particle density, porosity, P-available, K-available, and Na-exchangeable are not significantly different between locations that have mangroves and non mangroves at various distances.

Keywords: *coastal agriculture, soil properties, mangrove, Baros Beach*