

ABSTRACT

Lower production of crops on Ultisol soil in South Sulawesi was due to the inhibited vegetative growth of the crops. Such problem emerged as a result of high level of exchangeable-Al (Alexch) in the soil, so that the crops would not be able to absorb sufficient nutrients from the soil. High concentration of Alexch has caused the nutrients to be unavailable, particularly P. The application of humic compounds and compost, which contains organic compounds, will be able to improve and reduce the Alexch level in the soil, so that they will be able to mobilize P in the soil. Objective of this research was to study the effect of humic compounds and compost of *Centrosema pubescens*, elephant grass, and chicken manure, on Alexch change in the soil and the increased P availability in an Ultisol of the South Sulawesi. Results of the research showed that humic compounds and compost have been able to reduce concentration of Alexch and increase P availability in Ultisol at the South Sulawesi. The application of the chicken manure compost has provided the best result in reducing concentration of Alexch in the soil and increasing the available P in comparison with the application of humic compounds. Key words: Alexch, P-available, compost, humic compounds, Ultisol