

**STUDY OF THE CHEMICAL PROPERTIES OF ANDOSOL SOIL ON
ORGANIC AND SEMI ORGANIC AGRICULTURE IN GETASAN
DISTRICT, CENTRAL JAVA**

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ABSTRACT

The chemical properties of Andosol soil are very unique because of the low P availability due to the presence of allophane, as well as the high presence of organic matter making agricultural practices commonly developed in this area were divided into organic farming and semi-organic farming. The research was conducted on the land of the P4S Citra Muda farmer group and the Ngudi Mulyo farmer group, Getasan District, Semarang Regency, Central Java Province. This research shows that in organic farming with kale commodities have an H₂O pH of 6.82, a NaF pH of 10.87, a total N of 0.268%, an available P of 0.021 ppm, and an organic C of 3.904%. In organic farming, the curly kale commodity has an H₂O pH of 6.82, a NaF pH of 11.02, N-total 0.209%, P-available 0.028 ppm, and C-organic 3.243%. In organic farming, mustard greens have an H₂O pH of 6.72, NaF pH of 10.89, total N of 0.4%, available P of 0.031 ppm, and organic C of 3.538%. In semi-organic farming, cabbage commodities have an H₂O pH of 6.69, NaF pH of 10.88, N-total of 0.136%, P-available of 0.032 ppm, C-organic of 3.486%, and there are pesticide residues with the active ingredients Tebuconazole and Cypermethrin. In semi-organic farming, celery commodities have an H₂O pH of 6.49, a NaF pH of 10.89, N-total 0.195%, P-available 0.040 ppm, C-organic 3.694%. In semi-organic farming, chili commodities have an H₂O pH of 6.59, a NaF pH of 10.90, N-total 0.230%, P-available 0.033 ppm, and C-organic 4.314%. In every organic farming practice, no pesticide residues were detected, whereas in semi-organic farming practices pesticide residues were found with the active ingredients Tebuconazole 0.09291 ppm and Cypermethrin 0.06883 ppm in cabbage commodities.

Keywords: Andosol, organic farming, semi organic farming, chemical properties, pesticide.