



# Cassowary

## ANNOUNCEMENTS

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### Beberapa sifat kimia tanah, serapan P, K, Fe, dan pertumbuhan Ubijalar ((Ipomoea batatas (L.) Lamb) akibat pemberian ekstrak krandalit, fraksi humat dan kalium pada Ultisol Warmare

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#### ABSTRACT

The aims of this research were to study some soil chemical properties, P, K, Fe uptake and sweet potato growth as the result of Crandalite Extract, Humat Fraction, and Potassium application on Ultisol Warmare. The pot experiment was conducted in the Screen house, Department of Soil Science Faculty of Agriculture, University of Papua Manokwari. The pot experiment has been done using Completed Randomize Design with 7 treatments and four replications, namely: A<sub>0</sub> = no fertilizer (treatment); A<sub>1</sub> = 100% crandalite extract + 0% organic fraction + 0% potassium; A<sub>2</sub> = 80% crandalite extract + 10% organic fraction + 10% potassium; A<sub>3</sub> = 60% crandalite extract + 20% organic fraction + 2 0% potassium; A<sub>4</sub> = 40% crandalite extract + 30% organic fraction + 30% potassium; A<sub>5</sub> = 20% crandalite extract + 40% organic fraction + 40% potassium, and; A<sub>6</sub> = 0% crandalite extract + 50% organic fraction + 50% potassium. The dosage of each treatment was 100-liter ha<sup>-1</sup> (4 g pot<sup>-1</sup>). Some soil chemical characteristics were analyzed for pH (H<sub>2</sub>O), pH (KCl), N-Total, C-organic, P-available, K-total, and Al-exchangeable. P, K, Fe concentrations. The plant growth variables were measured mainly for long steam on 5, 6, 7 and 8 weeks after planting, biomass of trubus, Data were analyzed using statistical analyses of Analysis of Variance (F Test) and DMRT test. The result showed that the application of crandalite extract, humic fraction and potassium was significantly increased the status of P-available and H-exchangeable, but not affected significantly for other soil chemical characteristics (pH H<sub>2</sub>O, pH KCl, C-organic percentage, N-total, and Al-exchangeable). Fresh and dry weight of sweet potato trubus were also significantly affected by those application, however it was not affected significantly on long steam; wet weight and dry weight of root and also root length of sweet potato. Among the treatments, the A<sub>2</sub> treatment (80% EFC: 10% Organic fraction: 10% Potassium) showed a better value of the status P-available, H-exchangeable and the biomass of trubus. This might be related to the characteristic of acid mineral soil that need high P fertilizer and the balance application of organic matter and potassium.

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