

**EFEK SISA KOMPOS BUBUK DAN GRANUL JERAMI PADI PLUS
TITONIA TERHADAP CIRI KIMIA REGOSOL SERTA PRODUKSI
CAISIM (*Brassica juncea* L.) PADA TANAM KETIGA**

SKRIPSI



*Sebagai Salah Satu Syarat Untuk
Memperoleh Gelar Sarjana Pertanian*

**PROGRAM STUDI ILMU TANAH
FAKULTAS PERTANIAN
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ABSTRAK

Efek sisa kompos jerami padi plus titonia tanam pertama masih berpengaruh pada tanam kedua, bahkan menghasilkan bobot basah bawang merah (dua kali lipat dari tanam pertama). Apakah pada tanam ketiga masih berpengaruh belum diketahui, sehingga diperlukan penelitian lanjutan. Setelah tanam kedua, tanah diberakan selama dua bulan baru dilakukan tanam ketiga dengan caisim (*Brassica juncea* L.). Tujuan penelitian untuk mempelajari pengaruh interaksi efek sisa bentuk kompos dan dosis terhadap ciri kimia Regosol pada awal tanam ketiga serta produksi caisim. Penelitian telah dilakukan di Rumah Kawat dan Laboratorium Tanah Fakultas Pertanian, Universitas Andalas, Padang. Penelitian menggunakan Rancangan Acak Lengkap Faktorial dengan 3 ulangan. Faktor pertama adalah efek sisa bentuk kompos (bubuk dan granul). Faktor kedua efek sisa dosis kompos (0. 10. 20. 30. 40 dan 50 ton/ha). Parameter tanah yang dianalisis adalah pH, P-tersedia, C-organik, N-total, KTK dan basa-basa (Ca-dd, Mg-dd dan K-dd). Untuk parameter tanaman yaitu tinggi, bobot, dan angkutan hara (N, P dan K). Data tanah disesuaikan dengan tabel kriteria penilaian ciri kimia tanah, sedangkan data tanaman diolah secara statistik menggunakan SPSS 16.0. Hasil penelitian menunjukkan bahwa efek sisa bentuk kompos dan dosis kompos pada awal tanam ketiga masih mampu meningkatkan ciri kimia Regosol yaitu pH, P-tersedia, C-Organik, N-total, KTK dan kandungan basa-basa (Ca-dd, Mg-dd dan K-dd) tanah. Terdapat interaksi antara efek sisa bentuk kompos dan efek sisa dosis kompos pada angkutan hara K tanaman. Sisa dosis optimal yaitu 10 ton/ha pada sisa kompos bubuk dan pada sisa kompos granul. Efek sisa bentuk kompos pada awal tanam ketiga masih mampu meningkatkan ciri kimia Regosol, yang terbaik yaitu bentuk granul. Sisa dosis kompos pada awal tanam ketiga masih mampu meningkatkan ciri kimia Regosol. Seiring peningkatan dosis kompos ciri kimia Regosol juga meningkat. Pengaruh utama efek sisa dosis kompos pada tanam ketiga diperoleh yang optimal sisa dosis 40 ton/ha untuk tinggi tanaman (41,16 cm) dan bobot segar tanaman 127,45 g/polybag. Angkutan hara N dan P terbaik diperoleh pada sisa dosis 40 ton/ha yaitu 4,55% dan 0,038%, secara berturut-turut.

Kata kunci : *caisim (Brassica juncea L.), kompos jerami padi plus titonia, regosol, sisa kompos bubuk, sisa kompos granul, tanam ketiga.*

**RESIDUAL EFFECTS OF POWDER AND GRANULE COMPOSTS
DERIVED FROM RICE STRA PLUS TITONIA ON CHEMICAL
CHARACTERISTICS OF REGOSOL AND CAISIM (*Brassica juncea* L.)
PRODUCTION ON THE THIRD PLANTING TIME**

ABSTRACT

The residual effect of rice straw compost plus titonia for the first planting still had an effect on the second planting time. It even increased the production of shallots (twice that of the first planting time). Whether the third planting time still had an effect or not on chemical characteristics of Regosol was interested to know. After the second planting time the soil was fallowed for two months before the third planting time was carried out. The aim of this research was to study the interaction effect of residual compost form and dose on the chemical characteristics of regosol at the beginning of the third planting time and caisim production. The research was conducted at the Wire House and Soil Laboratory, Faculty of Agriculture, Andalas University, Padang. The study used a factorial design consisting 2 factors. The first factor was the residual effect of the compost form (powder and granule). The second factor was the residual effect of the compost dose (0. 10. 20. 30. 40 and 50 ton/ha). Soil parameters analyzed were pH, P-available, Organic-C, total-N, CEC and bases (Ca-exch. Mg-exch. and K-exch.) and crop parameters were height fresh and dry, weight, and nutrients (N, P dan K) uptake. Soil chemical data were compared to the criteria table of soil chemical characteristics. While crops data were statistically processed using SPSS 16.0. The results showed that the residual effect of form and dosage of compost at the beginning of the third planting time was still able to increase the chemical characteristics of Regosol, pH, P-available, Organic-C, total-N, CEC and the content of (Ca, Mg and K exchangeable). There was an interaction between residual effect of form and dose of compost on K-uptake by crops. The optimal residual dose was 10 tons/ha (for powdered and granule compost). Effect the compost form at the beginning of the third planting time was still able to improve the chemical characteristics of regosol, the best was in the form of granules. The dose of the residual compost at the beginning of the third planting time was still able to improve the chemical characteristics of Regosol. As the compost dose increased, the chemical characteristics of the regosol also increased. The main effect of the residual dose of compost on the third planting time was obtained at 40 tons/ha for plant height (41.16 cm) and for plant fresh weight (127.45 g/polybag). The best value for N-uptake (4.55%) and P-uptake (0.038%), was also found under application 40 t compost/ha.

Keywords : caisim (*Brassica juncea* L.), rice straw plus titonia compost, regosol, powdered compost residue, granul compost residue, third planting time.