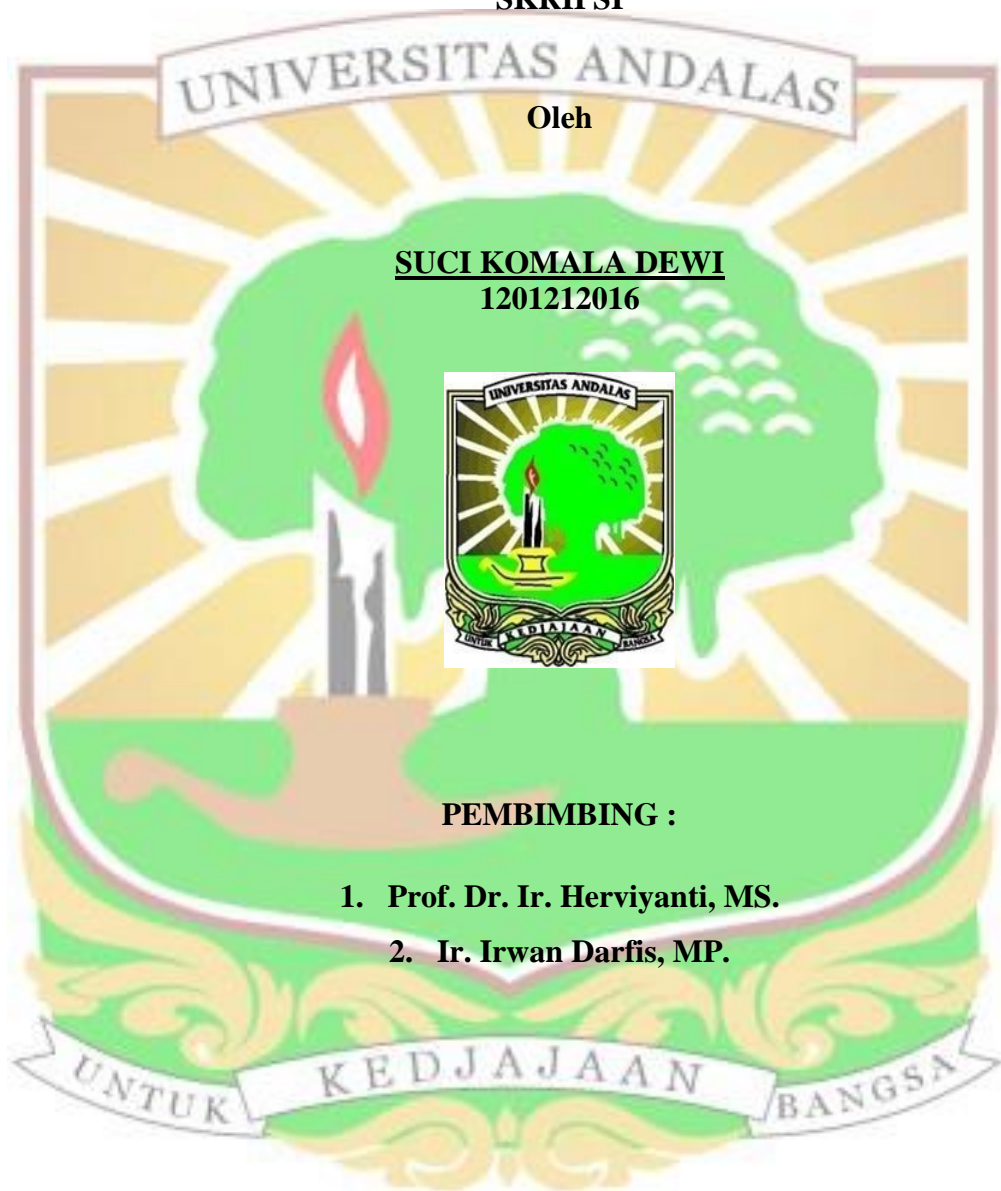


**EFEK SISA BUBUK *SUBBITUMINUS* YANG  
DIAKTIVASI DENGAN UREA, KCl, NaOH DAN NaCl  
TERHADAP BEBERAPA SIFAT KIMIA OXISOL  
DAN PRODUKSI TANAMAN JAGUNG ( *Zey mays* .L )**

**SKRIPSI**



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**EFEK SISA BUBUK *SUBBITUMMINUS* YANG DIAKTIVASI DENGAN  
UREA, KCl, NaOH DAN NaCl TERHADAP BEBERAPA SIFAT KIMIA  
OXISOL DAN PRODUKSI TANAMAN JAGUNG (*Zea mays* .L)**

**ABSTRAK**

Penelitian dilaksanakan dari bulan Februari sampai Juni 2016, di Padang Siantah, Kenagarian Situjuh Limo Nagari, Kabupaten Lima Puluh Kota, Sumatera Barat dan di Laboratorium Jurusan Tanah, Fakultas Pertanian, Universitas Andalas. Tujuannya adalah mempelajari efek sisa interaksi bubuk *Subbituminus* dengan Bahan pengaktif dalam memperbaiki beberapa sifat kimia Oxisol dan produksi tanaman Jagung (*Zea mays* .L). penelitian berupa Faktorial 4x5 dalam RAK dengan dua kali ulangan. Faktor A yaitu A<sub>1</sub>= Sisa bubuk batubara 0,25% (3,125 kg/petak), A<sub>2</sub>= Sisa bubuk batubara 0,5% (6,25 kg/petak), A<sub>3</sub>= Sisa bubuk batubara 0,75% (9,375 kg/petak), A<sub>4</sub>= Sisa bubuk batubara 1,0% (12,5 kg/petak) dan faktor B yaitu B<sub>0</sub>= Tanpa bahan pengaktif, B<sub>1</sub>= Sisa Urea 125% (231,83 g/petak), B<sub>2</sub>= Sisa KCl 125% (193,05 g/petak), B<sub>3</sub>= Sisa NaOH 1,0% (82,5 g/8250 mL/petak), B<sub>4</sub>= Sisa NaCl 1,0% (118,8 g/8250 mL/petak). Data hasil penelitian dianalisis secara statistik dengan diuji F pada taraf 5%. Hasil penelitian menunjukkan tidak ada interaksi antara sisa bubuk *Subbituminus* dengan bahan pengaktif Urea, KCl, NaOH dan NaCl. Namun, efek sisa utama bubuk *Subbituminus* memberikan pengaruh terhadap kenaikan produksi tanaman yaitu dari 7,46 ton/Ha menjadi 7,96 ton/Ha jagung dibandingkan dengan musim tanam I sedangkan efek sisa utama bahan pengaktif Urea memiliki kemampuan yang hampir sama dengan NaOH lebih baik dibandingkan pengaktif KCl dan NaCl untuk memperbaiki beberapa sifat kimia Oxisol yaitu menurunkan Al-dd tanah sebesar 0,26 me/100g, meningkatkan C-organik sebesar 0,67%, P tersedia 4,23 ppm dan KTK sebesar 4,73 me/100g, dibandingkan dengan tanpa bahan pengaktif.

Kata kunci : *Oxisol, Efek Sisa, Urea, KCl, NaOH, NaCl, Zea mays.L ,dan Bubuk Subbituminus*

EFFECT OF *SUBBITUMINUS* POWDER RESIDUE ACTIVATED BY UREA,  
KCl, NaOH and NaCl TO CHEMICAL PROPERTIES OF OXISOL AND  
CORN (*Zea mays* .L) YIELD

ABSTRACT

This research was conducted in Padang Siantah, Kenagarian Situjuh Limo Nagari, Kabupaten Lima Puluh Kota, as well as at Laboratorium of Soil Science Faculty of Agriculture, Andalas University, West Sumatera from February to June 2016. This research was aimed to study the effect of *subbituminus* residue with some activation materials in improving some Oxisol chemical properties and corn (*Zey mays* .L) yield. The research consisted of two factors, the first factor was residue of *subbituminus* powder (A) consisted of 4 levels, those were : A1=0.25% (3.125 kg/plot), A2=0.5% (6.25 kg/plot), A3=0.75% (9.375 kg/plot), A4=1.0% (12.5 kg/plot). The second factor was activating materials (B) consisted of 5 levels, those were B0=without activating material, B1=residue being activated by Urea 125% (231.83 g/pot), B2=residue being activated by KCl 125% (193.05 kg/pot), B3=residue being activated by NaOH 1.0% (82.5 g/8.25 L/plot), B4=residue being activated by NaCl 1.0% (118.8 g/8.25 L/plot). The result showed that there was no interaction between *subbituminus* powder residue and Urea, KCl, NaOH, NaCl as activating materials. However, *subbituminus* powder residue improved plant yield from 7.46 ton/ha to 7.96 ton/ha compared to the first season. Meanwhile, the effect of residue activated by Urea had the same ability as NaOH which were better than KCl and NaCl activating materials in improving some chemical properties of Oxisol. The treatments reduced soil Al-exchangeable by 0.26 me/100g, increased organic-C by 0.67%, P available by 4.23 ppm, and CEC by 4.73 cmol/kg, compared to that without activating material.

Key Word : Oxisol, residue effect, Urea, KCl, NaOH, and NaCl, *Zey mays* .L, and *Subbituminus* powder





