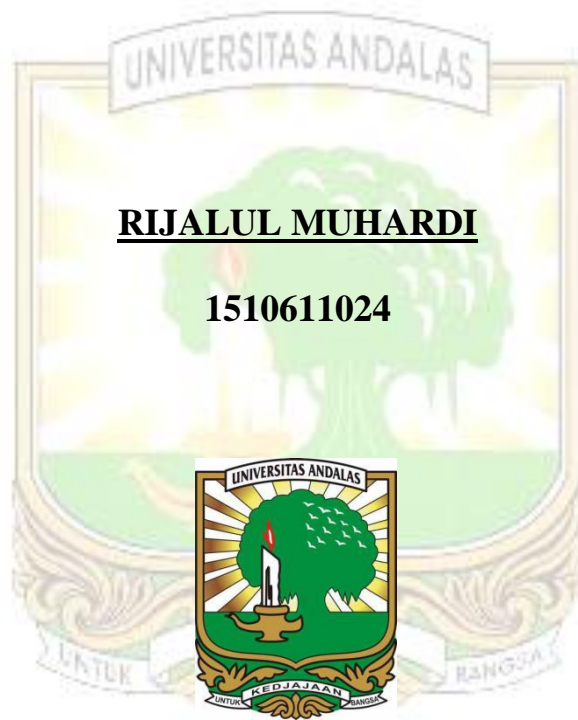


**KANDUNGAN SELULOSA, LIGNIN, DAN SILIKA TANAMAN
TITONIA (*Tithonia diversifolia*) SEBAGAI PAKAN HIJAUAN
DENGAN JENIS PUPUK BERBEDA PADA TANAH ULTISOL**

SKRIPSI

Oleh:



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FAKULTAS PETERNAKAN

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Rijalul Muhardi di bawah bimbingan
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ABSTRAK

Penelitian ini bertujuan untuk mendapatkan nilai kandungan selulosa, lignin, dan silika tanaman titonia (*Tithonia diversifolia*) yang diberi pupuk organik dan pupuk NPK mutiara di tanah ultisol. Penelitian menggunakan Rancangan Acak Kelompok (RAK) dengan 4 perlakuan dan 4 kelompok sebagai ulangan. Perlakuan disusun sebagai berikut, P0 (tanpa pupuk), P1 (pupuk kandang sapi 10 ton/ha), P2 (pupuk NPK mutiara 937,5 kg/ha), dan P3 (kombinasi pupuk NPK mutiara 937,5 kg/ha + pupuk kandang sapi 10 ton/ha). Parameter yang diamati adalah kandungan selulosa, lignin, dan silika tanaman titonia. Data diolah menggunakan analisis keragaman dan perbedaan antar perlakuan diuji dengan *Duncan multiple Range Test* (DMRT). Hasil penelitian menunjukkan kandungan selulosa 17,19% - 24,96%, lignin 9,27% - 14,86%, dan silika 0,54% - 1,76%. Analisis keragaman menunjukkan bahwa penggunaan pupuk NPK mutiara memberikan pengaruh sangat nyata ($P < 0,01$) terhadap kandungan selulosa dan lignin, namun tidak berpengaruh terhadap kandungan silika tanaman titonia. Kesimpulan dari penelitian ini adalah pemberian kombinasi pupuk NPK mutiara dan pupuk kandang menghasilkan kualitas serat yang lebih baik pada tanaman titonia berumur dua bulan yang ditanam di tanah ultisol.

Kata Kunci : Lignin , Pemupukan , Selulosa, Silika, Titonia.

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THE CONTENTS OF CELLULOSE, LIGNIN, AND SILICA IN TITHONIA DIVERSIFOLIA AS A GREEN FEED TOWARDS DIFFERENT TYPES OF FERTILIZER IN ULTISOLS

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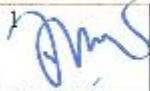
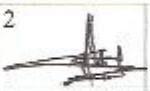

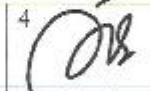
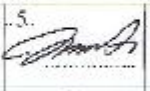

ABSTRACT

The purpose of this research is to investigate the contents of cellulose, lignin, and silica content of *Tithonia diversifolia* given organic fertilizers and NPK pearl fertilizer in ultisols. The research uses a randomized block design (RBD) with 4 treatments and 4 groups as replications. The treatments are, P0 (without fertilizer), P1 (cow manure 10 tons / ha), P2 (NPK pearl fertilizer 937.5 kg / ha), and P3 (combination of pearl NPK fertilizer 937.5 kg / ha + fertilizer cow manure 10 tons / ha). The parameters observes the content of cellulose, lignin, and silica of *Tithonia diversifolia*. The data were processed using analysis of diversity and the differences between treatments were tested by using the Duncan Multiple Range Test (DMRT). The results shows that cellulose contents is 17.19% - 24.96%, lignin 9.27% - 14.86%, and silica 0.54% - 1.76%. The diversity analysis shows that the use of NPK pearl fertilizer have a very significant effect ($P < 0.01$) on cellulose and lignin content, but have no effect on the silica content of *Tithonia* plants. It can be concluded that the combination of NPK pearl fertilizer and cow manure produce better quality of fiber in two months old *Tithonia diversifolia* grown in ultisols.

Key words : Lignin, Fertilization, Cellulose, Silica, *Tithonia*.

This scripition has been defended in front of the team of examiners and has passed on : Mei 01th, 2020.

Abstract has been approved by the examiners:

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