

## **PERTUMBUHAN, PRODUKSI DAN KANDUNGAN SERAT RUMPUT SIGNAL (*Brachiaria decumbens* cv. Basilisk) YANG DIBERI PUPUK UREA DENGAN DOSIS YANG BERBEDA**

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### **INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pupuk urea dengan dosis yang berbeda terhadap pertumbuhan, produksi biomassa serta kandungan *neutral detergent fiber* (NDF) dan *acid detergent fiber* (ADF) *Brachiaria decumbens* cv. Basilisk. Biji *Brachiaria decumbens* cv. Basilisk digerminasikan selama 12 hari sampai biji tumbuh  $\pm 10$  cm. Hasil germinasi dipindah dalam *pot* tanaman dengan diameter 25 cm. Satu *pot* diisi untuk satu tanaman. Cara penempatan *pot* menggunakan metode rancangan acak lengkap pola searah dengan 4 Perlakuan pupuk yang diberikan meliputi pupuk urea dengan level 0 kg ha<sup>-1</sup> (P0), 50 kg ha<sup>-1</sup> (P1), 100 kg ha<sup>-1</sup> (P2) dan 150 kg ha<sup>-1</sup>. Pemberian pupuk urea dilakukan satu kali selama pemeliharaan yaitu pada umur 30 hari. Pengamatan tinggi tanaman dan panjang tanaman dilakukan 7 hari sekali dalam 60 hari, pengamatan tunas dilakukan setelah pemupukan. *Defoliasi* dilakukan pada hari ke-60 dengan ketinggian 10 cm di atas permukaan tanah. Variabel yang diamati adalah tinggi tanaman, panjang tanaman, jumlah tunas, produksi segar, kandungan bahan kering (BK) dan bahan organik (BO) serta kandungan NDF dan ADF. Data dianalisis dengan menggunakan analisa varian. Hasil yang berbeda nyata akan diuji lanjut menggunakan *Duncan's New Multiple Range Test*. Hasil penelitian menunjukkan bahwa penambahan dosis pemupukan berpengaruh nyata ( $P < 0,05$ ) terhadap tinggi tanaman, jumlah tunas, produksi segar serta kandungan NDF dan ADF rumput *Brachiaria decumbens* cv. Basilisk. Penambahan dosis pupuk tidak berpengaruh terhadap panjang tanaman dan kandungan BK dan BO rumput *Brachiaria decumbens* cv. Basilisk. Berdasarkan penelitian dapat disimpulkan bahwa pemupukan dengan dosis 50 kg/ha mampu menaikkan produktivitas dan menurunkan serat rumput *Brachiaria decumbens* cv. Basilisk.

Kata kunci : *Brachiaria decumbens* cv. Basilisk, Dosis pupuk urea, Kandungan nutrien, Pertumbuhan, Produksi, NDF dan ADF

## **GROWTH, PRODUCTION AND CRUDE FIBER CONTENT SIGNAL GRASS (*Brachiaria decumbens* cv. Basilisk) OF DIFFERENT LEVEL UREA FERTILIZER**

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### **ABSTRACT**

This study was aimed to determine the effect of urea fertilizer with different dosage on growth, biomass production and the amount of *neutral detergent fiber* (NDF) and *acid detergent fiber* (ADF) *Brachiaria decumbens* cv. Basilisk. Seeds of *Brachiaria decumbens* cv. Basilisk germinated for 12 days until the seeds grow  $\pm$  10 cm. The germinated of seed were moved in a pot with a diameter of 25 cm. One pot for one plant. place the pot used completely randomized design (CRD) in line with the pattern with 4 treatment of fertilizer given include urea doses 0 kg ha<sup>-1</sup> (P0), 50 kg ha<sup>-1</sup> (P1), 100 kg ha<sup>-1</sup> (P2) and 150 kg ha<sup>-1</sup>. Fertilizer application was done one time for maintenance that was at the age of 30 days. Observation of plant height and length of the plant was done 7 days within 60 days, the buds observations were after fertilization. Defoliation were on the 60<sup>th</sup> day with a height of 10 cm above the ground. The variables measured were plant height, plant length, number of buds, fresh production, content of dry matter (DM) and organic matter (OM) and the amount of NDF and ADF. The results were analyzed using analysis of oneway Anova. Significantly different results was tested using Duncan's New Multiple Range Test. The results showed that the addition of fertilizer doses significantly (P <0.05) on plant height, number of shoots, fresh produce as well as the content of NDF and ADF *Brachiaria decumbens* cv. Basilisk grass. Increasing doses of fertilizer was not affect the length of the plant and the content of DM and OM *Brachiaria decumbens* cv. Basilisk grass. This study concluded that the fertilizer dose of 50 kg/ha was able to raise production and decrease crude fiber of the *Brachiaria decumbens* cv. Basilisk grass.

**Key Words:** *Brachiaria decumbens* cv. Basilisk, Dose urea fertilizer, Nutrient content, Growth, Production, NDF and ADF