

## **PENGARUH NAUNGAN DAN LEVEL PEMUPUKAN NITROGEN TERHADAP KOMPOSISI KIMIA DAN KECERNAAN *IN VITRO* RUMPUT *Pennisetum purpureum* cv. Mott**

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### **INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh naungan dan level pupuk nitrogen berbeda terhadap komposisi kimia dan kecernaan nutrisi rumput odot (*Pennisetum purpureum* cv. Mott). Penelitian dilakukan menggunakan rancangan *split plot design*. Plot utama yaitu naungan menggunakan tegakan tanaman pohon jati dan sebagai kontrol rumput di tanam pada lahan terbuka tanpa naungan. Level pupuk nitrogen digunakan sebagai sub plot terdiri atas 0, 150, dan 300 kg urea/ha. Rumput dipanen pada umur 40 hari dan diamati kandungan nutrisi yang meliputi bahan kering (BK), bahan organik (BO), protein kasar (PK), serat kasar (SK), kecernaan *in vitro* bahan kering (KcBK), dan kecernaan bahan organik (KcBO) metode *Tilley and Terry 2* tahap. Hasil penelitian dianalisis variansi pola split plot apabila hasilnya berbeda nyata dilanjutkan dengan uji Duncan's Multiple Range Test. Hasil pengamatan menunjukkan bahwa kandungan BK dan SK rumput odot di bawah naungan lebih rendah, sedangkan BO dan PK lebih tinggi dibandingkan lahan terbuka. BK rumput odot di bawah naungan dan tanpa naungan berurutan adalah 9,48 dan 14,92%, SK rumput odot di bawah naungan dan tanpa naungan berurutan adalah 18,92 dan 24,72%, BO rumput odot di bawah naungan dan tanpa naungan berurutan adalah 88,1 dan 83,94% dan PK rumput odot di bawah naungan dan tanpa naungan berurutan adalah 16,36 dan 13,80%. Pemberian pupuk N berpengaruh nyata terhadap BO dan PK pada level 150, dan 300 kg urea/ha. Bahan organik pada level 0; 150; dan 300 kg N/ha masing masing berurutan 86,32, 89,24, dan 82,51%, dan PK pada level 0; 150; dan 300 kg N/ha masing masing berurutan 11,68, 16,08, dan 17,46%. Disimpulkan bahwa naungan menghasilkan BK dan SK lebih rendah, akan tetapi BO dan PK lebih tinggi, serta pemupukan N menghasilkan BO dan PK lebih tinggi pada rumput odot. Level pupuk yang dianjurkan untuk rumput odot yaitu 150 kg urea/ha.

Kata kunci : *Pennisetum purpureum* cv. Mott, Naungan, Pupuk nitrogen, Komposisi kimia, Kecernaan *in vitro*.

## THE EFFECT OF SHADING AND NITROGEN FERTILIZATION LEVEL ON NUTRIENT CONTENT AND IN VITRO DIGESTIBILITY OF *Pennisetum purpureum* cv. Mott

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### ABSTRACT

This study was aimed to determine the effect of shading and different levels of nitrogen fertilizer on the nutrients composition and nutrient digestibility of odot grass (*Pennisetum purpureum* cv. Mott). The study was conducted by using the split plot design, with under teak shading and without shading (open land) as main plot. The sub plot was nitrogen fertilizer levels which consisted of three levels 0, 150, and 300 kg urea/ha. The grass was harvested on 40 days and variable measured were dry matter (DM), organic matter (OM), crude protein (CP), and crude fiber (CF) and *in vitro* dry matter digestibility (DMD), and organic matter digestibility (OMD) by 2-stage *Tilley* and *Terry* method. The data were analyzed with analysis of variance of the split plot pattern and if the mean were significant difference, continued with the Duncan Multiple Range Test. The results showed that DM and CF of odot grass in the shading area were lower, but the OM and CP were higher than open land (without shaded). Dry matter of odot grass in the shading area and without shaded were 9.48 and 14.92%, respectively, crude fiber of odot grass in the shading area and without shaded were 18.92 and 24.72%, respectively, OM of odot grass in the shading area and without shaded were 88,1 and 83,94%, respectively, and CP of odot grass in the shading area and without shaded were 16.36 and 13.80%, respectively. Nitrogen fertilizer level were significant on OM and CP at 150 and 300 kg urea/ha. Organic matter content at 0; 150; and 300 kg urea/ha of nitrogen fertilizer level were 86,32, 89,24, and 82,51%, respectively. Crude protein content at 0; 150; and 300 kg urea/ha of nitrogen fertilizer level were 11.68, 16.08, and 17.46%, respectively. The conclusion of this study are shading were decrease DM, CF but increase OM and CP, and nitrogen fertilizer were increase OM and CP of odot grass. Nitrogen fertilizer at 150 kg urea/ha were recommended for odot grass.

Keywords : *Pennisetum purpureum* cv. Mott, Shade, Nitrogen fertilizer, Nutrient content, *In vitro* digestibility.