

PENGARUH DOSIS PENGGUNAAN PUPUK NPK TERHADAP KUALITAS DAN KECERNAAN *IN VITRO* RUMPUT RUZI (*Brachiaria ruzi*ensis Germain et Everard cv. Kennedy))

Rina Prafiyanti
10/301901/PT/05912

INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh dosis penggunaan pupuk NPK terhadap kualitas dan pencernaan *in vitro* bahan kering dan bahan organik rumput ruzi (*Brachiaria ruzi*ensis Germain et Everard cv. Kennedy). Pupuk NPK yang digunakan adalah NPK Mutiara 25-7-7. Materi penelitian yang digunakan adalah biji rumput ruzi (*Brachiaria ruzi*ensis Germain et Everard cv. Kennedy) yang ditanam dalam 15 *polybag* dan dibagi dalam 3 perlakuan dan 5 ulangan. Perlakuan yang diberikan antara lain perlakuan kontrol, perlakuan dengan pemberian pupuk NPK dosis 150 kg/ha, dan perlakuan dengan pemberian pupuk NPK dosis 300 kg/ha. Variabel yang diamati antara lain kandungan bahan kering (BK) dan bahan organik (BO), protein kasar (PK), serat kasar (SK), lemak kasar (LK), dan pencernaan *in vitro* bahan kering (KcBK) dan bahan organik (KcBO). Tanaman rumput ruzi ditanam dengan jarak tanam *polybag* 50x50 cm, dipanen pada umur 45 hari, dikeringkan pada suhu 55 °C, dan digiling kemudian dilakukan analisis proksimat dan uji pencernaan menggunakan teknik *in vitro* Tilley dan Terry dua tahap. Data dianalisis dengan analisis variansi Rancangan Acak Lengkap (RAL) pola searah dan untuk mengetahui perbedaan antar nilai perlakuan dilanjutkan dengan uji *Duncan's multiple range test* (DMRT). Hasil penelitian menunjukkan bahwa dengan pemberian pupuk NPK pada dosis yang berbeda tidak memberikan pengaruh nyata terhadap komposisi kimia rumput ruzi yang meliputi BK, BO, PK, LK, dan pencernaan *in vitro* bahan kering dan bahan organik diantara ketiga perlakuan, namun memberikan pengaruh nyata ($P < 0,05$) terhadap kandungan serat kasar. KcBK rumput ruzi dengan pemupukan 0 kg/ha, 150 kg/ha, 300 kg/ha masing-masing adalah 54,43%; 59,11%; 58,52% dan KcBO rumput ruzi dengan pemupukan 0 kg/ha, 150 kg/ha, 300 kg/ha masing-masing adalah 50,64%; 55,6%; dan 53,99%.

Kata kunci: Rumput ruzi (*Brachiaria ruzi*ensis Germain et Everard cv. Kennedy), Pupuk NPK, Analisis proksimat, Kecernaan *in vitro*

EFFECT OF NPK FERTILIZER DOSAGE ON THE QUALITY AND IN VITRO DIGESTIBILITY OF THE RUZIGRASS (*Brachiaria ruziziensis* Germain et Everard cv. Kennedy)

Rina Prafiyanti
10/301901/PT/05912

ABSTRACT

This study aimed to determine the effect of dose of NPK fertilizer applied on the quality and digestibility in vitro dry matter and organic matter Ruzigrass (*Brachiaria ruziziensis* Germain et Everard cv. Kennedy). NPK fertilizer was used NPK 25-7-7 Pearl. The research material used was seed of Ruzigrass (*Brachiaria ruziziensis* Germain et Everard cv. Kennedy) were planted in 15 polybags and divided in 3 treatments and 5 replications. Treatments include control, treatment with NPK fertilizer dose of 150 kg/ha, and the treatment with NPK fertilizer dose of 300 kg/ha. The variables observed were content of dry matter (DM) and organic matter (OM), crude protein (CP), crude fiber (CF), ether extract (EE), in vitro dry matter digestibility (IVDMD) and in vitro organic matter digestibility (IVOMD). Ruzigrass were planted at a polybag spacing of 50x50 cm, harvested at 45 days, dried at 55°C, and then milled, proximate analyzes and tests carried out using the technique of in vitro digestibility of Tilley and Terry two stages. Data were analyzed by analysis of variance completely randomized design (CRD) in one way and to know the difference between the value of treatment followed by a test of Duncan's multiple range test (DMRT). The results showed that with NPK fertilizer at different doses has not significant effect on the chemical composition of Ruzigrass which include DM, OM, CP, EE, and in vitro dry matter digestibility and in vitro organic matter digestibility between treatment, however significant effect on the content of crude fiber ($P < 0,05$). IVDM result of Ruzigrass that have been fertilized on dose 0 kg/ha, 150 kg/ha, and 300 kg/ha are 54,43%; 59,11%; 58,52% and IVOMD of Ruzigrass fertilized on dose 0 kg/ha, 150 kg/ha, and 300 kg/ha were 50,64%; 55,6%; dan 53,99%.

Keywords: Ruzigrass (*Brachiaria ruziziensis* Germain et Everard cv. Kennedy), NPK, Proximate analysis, In vitro digestibility