

PERTUMBUHAN DAN PRODUKSI RUMPUT GAJAH (*Pennisetum purpureum*) VARIETAS LOKAL DAN TIFTON PADA DEFOLIASI PERTAMA DAN KEDUA

Anggar Ricky Riswanto
15/379743/PT/06940

INTISARI

Penelitian ini bertujuan untuk mengetahui perbedaan pertumbuhan dan produksi rumput gajah (*Pennisetum purpureum*) varietas tifton dan varietas lokal. Penelitian ini menggunakan metode rancangan petak terbagi (*split-plot design*) dengan 2 faktor untuk menguji pertumbuhan dan produksi tanaman. Data yang diperoleh akan dianalisis variansi menurut rancangan split plot 2x2 dengan plot utama dari penelitian ini yaitu defoliiasi 1 dan defoliiasi 2, sedangkan sub plot yaitu varietas rumput gajah yang terdiri dari tifton dan lokal dengan interval pemotongan yang sama yaitu 60 hari. Masing-masing perlakuan dilakukan sebanyak 3 kali ulangan. Uji *Duncan's multiple range test* (DMRT) dilakukan apabila menunjukkan hasil yang signifikan dengan bantuan *software personal komputer Stastical Product and Service Solution* (SPSS). Variabel yang diamati meliputi pertumbuhan vegetatif yang terdiri dari tinggi tanaman, panjang tanaman, panjang daun, lebar daun, diameter batang dan jumlah tunas. Produksi tanaman diukur dengan cara mengukur berat segar, bahan kering (BK) dan bahan organik (BO) tanaman. Hasil penelitian menunjukkan bahwa perbedaan varietas dan defoliiasi berpengaruh tidak nyata terhadap pertumbuhan tanaman (tinggi tanaman, panjang tanaman, panjang daun, lebar daun, panjang ruas, dan diameter batang), kecuali pada jumlah tunas. Perbedaan varietas dan defoliiasi berpengaruh nyata ($P < 0,05$) terhadap produksi tanaman yaitu pada produksi segar, bahan kering (BK) dan bahan organik (BO). Produksi tertinggi pada produksi segar, produksi BK dan produksi BO dari kedua varietas terdapat pada defoliiasi kedua yaitu $141,84 \pm 22,04$ ton/ha/panen untuk produksi segar, $24,63 \pm 5,35$ ton/ha/panen untuk produksi BK dan $21,93 \pm 4,73$ ton/ha/panen untuk produksi BO. Dari hasil penelitian ini dapat disimpulkan bahwa tanaman rumput gajah varietas tifton mempunyai jumlah tunas lebih banyak dan produksi lebih tinggi dibandingkan dengan varietas lokal. Jumlah tunas dan produksi rumput gajah pada defoliiasi kedua lebih tinggi dibandingkan dengan defoliiasi pertama.

Kata kunci: Defoliiasi, *Pennisetum purpureum*, Pertumbuhan, Produksi, Varietas

GROWTH AND PRODUCTION DIFFERENCES BETWEEN ELEPHANT GRASS (*Pennisetum purpureum*) OF LOCAL AND TIFTON VARIETY IN THE FIRST AND SECOND DEFOLIATION

Anggar Ricky Riswanto
15/379743/PT/06940

ABSTRACT

This research was aimed to discover the growth and production differences between elephant grass (*Pennisetum purpureum*) of tifton and local variety. This research used split plot method with two factors, those are to examine plants growth and production. The collected data was variance analyzed according to split plot 2x2 with the main plot of this research was defoliation 1 and defoliation 2, while the sub plot were elephant grass varieties in which consisted of tifton and local with the same cutting interval of 60 days. Each treatment was executed 3 times. *Duncan multiple range test* (DMRT) was conducted if significant results were shown with the help of computer personal software Statistical Product and Service Solution (SPSS). Variables being observed covered vegetative growth which consist of plant height, plant length, leaves length, leaves width, stem diameter, and the number of tiller. Plants production was measured by measuring fresh weight, dry ingredients and organic ingredients of plant. The results showed that differences in varieties and defoliation had given unreal effect to the growth of the plants (plant height, plant length, leaves length, leaves width, internode length, and stem diameter), with the exception to the number of tiller. Varieties and defoliation differences had proven its real effects ($P < 0,05$) on plants production which covered fresh production, dry ingredients and organic ingredients. The highest production in fresh production, dry ingredients production and organic ingredients production from both varieties happened in the second defoliation that is 141.84 ± 22.04 ton/ha/harvest of fresh production, 24.63 ± 5.35 ton/ha/harvest of dry ingredients production and 21.93 ± 4.73 ton/ha/harvest of organic ingredients production. Based on this research it can be concluded that elephant grass of tifton variety has more tiller than of local variety. The number of tiller and the production of elephant grass during the second defoliation was higher than the first one.

Keywords: Defoliation, Growth, *Penniselum purpureum*, Production, Varieties