

**PENGARUH PEMBERIAN PUPUK HIJAU CAIR GULMA TERHADAP
PRODUKTIVITAS DAN KUALITAS KIMIA RUMPUT GAJAH
VARIETAS TAIWAN (*Pennisetum purpureum cv. Taiwan*)
PADA UMUR POTONG YANG BERBEDA**

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INTISARI*)

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh pupuk hijau cair gulma terhadap produktivitas dan kualitas kimia rumput gajah varietas Taiwan (*Pennisetum purpureum cv. Taiwan*) pada umur potong yang berbeda. Penelitian ini dilaksanakan tanggal 5 November 2017 sampai dengan 14 Februari 2018 di Unit Pelaksana Teknis (UPT) Teaching Farm Fakultas Agroindustri Universitas Mercu Buana Yogyakarta yang terletak di Gunungbulu, Argorejo, Sedayu, Bantul dan dilanjutkan di laboratorium kimia Universitas Mercu Buana Yogyakarta. Penelitian ini dirancang dengan menggunakan Rancangan Acak Kelompok (RAK) pola Faktorial 4×3 dengan 3 blok sebagai ulangan. Faktor pertama pemberian pupuk hijau cair terdiri dari 4 taraf perlakuan B0 : Kontrol, B1 : Pupuk hijau cair Babadotan, B2 : Pupuk hijau cair Jonga-jonga, dan B3 : Pupuk hijau cair Eceng gondok, sedangkan faktor kedua umur potong yang terdiri dari 3 taraf perlakuan yaitu U30 : Umur potong 30 hari, U40 : Umur potong 40 hari, dan U50 : Umur potong 50 hari. Variabel yang di ukur adalah jumlah anakan, tinggi tanaman, jumlah daun, produksi bahan segar, produksi bahan kering, kadar air, protein kasar, serat kasar, lemak kasar, dan abu. Data dianalisis menggunakan *Analysis of Variance* (ANOVA), jika ada perbedaan nyata dilanjutkan dengan uji *Duncan's New Multiple Range Test* (DMRT). Hasil penelitian menunjukkan adanya interaksi antara pupuk hijau cair gulma dengan umur potong berpengaruh nyata terhadap protein kasar dan serat kasar. Pupuk hijau cair gulma berpengaruh nyata terhadap jumlah anakan, tinggi tanaman, jumlah daun produksi bahan segar, produksi bahan kering, protein kasar, dan serat kasar. Umur potong berpengaruh nyata terhadap jumlah anakan, tinggi tanaman, jumlah daun produksi bahan segar, produksi bahan kering, kadar air, protein kasar, serat kasar, lemak kasar, dan abu. Berdasarkan hasil penelitian dapat disimpulkan bahwa pemberian pupuk hijau cair gulma B3 : Eceng gondok dan umur potong 40 hari pada tanaman rumput gajah varietas Taiwan (*Pennisetum purpureum cv. Taiwan*) menghasilkan produktivitas dan kualitas kimia terbaik.

Kata kunci : *Pennisetum purpureum cv. Taiwan*, produktivitas, kualitas kimia, pupuk hijau cair gulma, umur potong.

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**THE EFFECT OF GIVING WEED LIQUID COMPOST ON
PRODUCTIVITY AND CHEMICAL QUALITY OF TAIWAN
ELEPHANT GRASS (*Pennisetum purpureum cv. Taiwan*)
AT DIFFERENT DEFOLIATION AGE**

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ABSTRACT^{*)}

The objective of research was to know the effect of giving weed liquid compost on the productivity and chemical quality of Taiwan elephant grass (*Pennisetum purpureum cv. Taiwan*) at different defoliation age. This research was conducted from 5th November 2017 until 14th February 2018 in the Unit Pelaksana Teknis (UPT) Teaching Farm Faculty of Agroindustry, University of Mercu Buana Yogyakarta at Gunungbulu, Argorejo, Sedayu, Bantul and then continued in Laboratory of Chemistry University of Mercu Buana Yogyakarta. This research used Completely Randomized Block Design (CRBD) 4x3 factorial pattern with 3 block as replication. The first factor of giving weed liquid compost consisting of 4 treatment B0 : (control) , B1 : (Babadotan liquid compost), B2 : (Jonga-jonga green liquid compost), B3 : (Eceng gondok liquid compost) and the second factor defoliation age consisting of 3 treatment U30 : age defoliation 30 days, U40 : age defoliation 40 days, U50 : age defoliation 50 days. The measured variable were number of tiller, plant height, number of leaf, fresh forage yield, dry matter production, water content, crude protein, crude fiber, ether extract, and ash. Data was analyzed by Analysis of Variance (ANNOVA), if there were significant differents continued by Duncan Multiple Range Test (DMRT). The result showed that the interaction between weed liquid compost with different defoliation age had significant effect on crude protein and crude fiber. The weed liquid compost has significant effect on number of tiller, plant height, number of leaf, fresh forage yield, dry matter production, crude protein, and crude fiber. The defoliation age has significant effect on number of tiller, plant height, number of leaf, fresh forage yield, dry matter production, water content, crude protein, crude fiber, ether extract, and ash. Based on the result of the research, it can be concluded that giving weed liquid compost B3 : Eceng gondok and defoliation age 40 days produce the best productivity and chemical quality of Taiwan Elephant Grass (*Pennisetum purpureum cv.Taiwan*).

Keywords : *Pennisetum purpureum cv.Taiwan*, productivity, chemical quality, weed liquid compost, defoliation age.

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