

INTISARI

Penelitian bertujuan untuk mengetahui pengaruh umur potong pertumbuhan dan produksi biomasa tanaman *Pennisetum purpureum* aksesori GU-2. Penelitian dilaksanakan selama tiga bulan di Lahan Hijauan Makanan Ternak dan Pastura di Laboratorium Hijauan Makanan Ternak dan Pastura Fakultas Peternakan Universitas Gadjah Mada. Data yang diperoleh dianalisis menggunakan analisis variansi mengikuti *completely randomized design* (CRD) pola searah. Perlakuan penelitian yaitu umur potong 20 hari, 35 hari, 50 hari dan 65 hari pada defoliiasi pertama dengan menggunakan setek batang tanaman berusia 90 hari. Tinggi tanaman pada umur potong 20 hari, 35 hari, 50 hari, 65 hari secara berturut turut adalah 93,39 cm, 189,26 cm, 232,35 cm, 250 cm. Tinggi tanaman pada umur potong 65 hari lebih tinggi dari umur potong 50 hari ($P < 0,05$). Panjang tanaman pada umur potong 20 hari, 35 hari, 50 hari, 65 hari secara berturut turut adalah 104,31 cm, 215,89 cm, 244,77 cm dan 258,48 cm. Jumlah daun pada umur potong 20 hari, 35 hari, 50 hari, 65 hari berturut turut adalah 9,60, 13,00, 17,66, 18,00. Panjang daun pada umur potong 20 hari, 35 hari, 50 hari, 65 hari secara berturut turut adalah 74,88 cm, 99,24 cm, 115,94 cm, 117,31 cm. Jumlah tunas pada umur potong 20 hari, 35 hari, 50 hari, 65 hari secara berurutan adalah 3, 5, 13,67, 18,67. Jumlah tunas pada umur potong 65 hari lebih banyak dari umur potong 50 hari ($P < 0,05$). Produksi biomasa yang meliputi produksi berat segar, produksi bahan kering dan produksi bahan organik. Produksi berat segar, bahan kering serta bahan organik tertinggi pada umur potong 65 hari. Kesimpulan dalam penelitian umur potong terbaik *Pennisetum purpureum* aksesori GU-2 adalah umur potong 65 hari dengan pertumbuhan tanaman, produksi bahan segar, bahan kering dan bahan organik terbaik.

(Kata kunci : *Pennisetum purpureum* aksesori GU-2, pertumbuhan, produksi biomassa, umur Potong)

THE EFFECT OF *Pennisetum purpureum* accession GU-2 CUTTING AGE TO THE GROWTH AND BIOMASS PRODUCTION FROM STEM CUTTING MATERIAL ON FIRST DEFOLIATION

Ghifar Syaeful Muluk

17/409757/PT/07346

ABSTRACT

The aim of this research is finding out the effect of cutting age to the growth and biomass production of *Pennisetum purpureum* accession GU-2. This research was conducted for three months in The Forage and Pastura Land, Laboratory of Forage and Pasture science, Faculty of Animal Husbandry Universitas Gadjah Mada. This research following one way completely randomized design method. The treatments were performed during the age of 20 days, 35 days, 50 days and 65 days in first defoliation with stem materials. The result of this research shows that the plants height growth which are cutting at the age of 20 days is 93.39 cm, at 35 days is 189.26 cm, at 50 days is 232.35 cm, and at 65 days is 250. The cutting age gives significant effect ($P < 0.05$) to the plant length at the age of 65 days (250 cm) which is taller than cutting age of 50 days (232,35 cm). The plants length growth which are cutting at the age of 20 days, 35 days, 50 day, and 65 days consecutively is 104.31 cm, 215.89 cm, 244.77 cm and 258.48 cm. The plants leaves amount which are cut at the age of 20 days, 35 days, and 50 days consecutively is 9.60, 13.00, 17.66, and 18.00. The leave length at cutting age of 20 days is 74.88 cm, 35 days is 99.24 cm, 50 days is 115.94 cm, and 65 days is 117.31 cm. The amount of sprout at cutting age of 20 days, 35 days, 50 days and 65 days consecutively is 3, 5, 13.67, 18.67. The amount of sprout at cutting age of 65 days is more than the one which have cutting age of 50 days ($P < 0.05$). Production of the best fresh weight, dry and organic material at cutting age of 65 days. In summary this research shows the best cutting age is 65 days with best plant growth, fresh product, dry, and organic materials production.

keywords : biomass production, growth, harvest age, *Pennisetum purpureum* accession GU-2

