KARAKTERISTIK MORFOLOGI, DAYA ADAPTASI DAN PRODUKSI BIOMASSA *Bothriochloa insculpta*, *Digitaria eriantha* DAN *Eragrostis tef* DI KARANGMALANG, YOGYAKARTA

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INTISARI

Penelitian ini bertujuan untuk mengetahui karakteristik morfologi, daya adaptasi dan produksi biomassa *Bothriochloa insculpta*, *Digitaria eriantha* dan *Eragrostis tef* yang ditanam di Karangmalang, Yogyakarta, Indonesia. Penelitian dilakukan dengan mengamati morfologi, daya adaptasi terhadap hama dan penyakit, serta menghitung produksi biomassa tanaman selama fase vegetatif. Materi yang digunakan adalah 3 jenis tanaman pakan introduksi yaitu *Bothriochloa insculpta*, *Digitaria eriantha* dan *Eragrostis tef*. Tanaman tersebut ditanam dalam plot ukuran 1 m^2 dengan cara disebar benihnya dan masing-masing tanaman mendapatkan pengulangan 3 kali. Produksi biomassa diambil dari produksi panen pertama dan panen kedua (*regrowth* pertama). Morfologi tanaman menunjukkan bahwa semua tanaman dapat berkembang dengan baik dan data pertumbuhan memperlihatkan bahwa semua tanaman tersebut memiliki pertumbuhan yang baik. Daya adaptasi ketiga varietas memiliki daya adaptasi yang baik karena bebas dari serangan hama dan penyakit. Panen pertama *Bothriochloa insculpta* menghasilkan 1,28 ± 0,25 ton/ha (BK 18,77 ± 0,74%; BO 85,30 ± 0,46%), produksi kedua 5,61 ± 3,01 ton/ha (BK 28,54 ± 2,47%; BO 87,54 ± 1,35%). Panen pertama *Digitaria eriantha* menghasilkan 2,15 ± 0,53 ton/ha (BK 15,91 ± 0,30%; BO 89,02 ± 2,68%), produksi kedua 8,66 ± 5,13 ton/ha (BK 28,75 ± 3,32%; BO 89,93 ± 0,90%). Panen pertama *Eragrostis tef* menghasilkan 0,55 ± 0,17 ton/ha (BK 20,37 ± 2,17%; BO 88,54 ± 1,06%), produksi kedua 0,65 ± 0,04 ton/ha (BK 24,85 ± 3,20%; BO 89,09 ± 0,86%). Hasil analisis menunjukan bahwa produksi tertinggi dari ketiga tanaman tersebut adalah produksi *Digitaria eriantha* karena pertumbuhan dan daya adaptasinya yang lebih baik.

Kata kunci: *Bothriochloa insculpta*, *Digitaria eriantha, Eragrostis tef*, daya adaptasi, morfologi, produksi biomassa

MORPHOLOGICAL CHARACTERISTICS, ADAPTABILITY AND BIOMASS PRODUCTION OF *Bothriochloa insculpta*, *Digitaria eriantha* AND *Eragrostis tef* IN KARANGMALANG, YOGYAKARTA

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ABSTRACT

This study was aimed to determine the morphological characteristics, adaptability and biomass production *Bothriochloa insculpta*, *Digitaria eriantha* and *Eragrostis tef* grown in Karangmalang, Yogyakarta, Indonesia. The study was carried out by observing morphology, adaptability to pests and diseases, and biomass production of crops during the vegetative growth. This study used 3 types of introduced feed crops, *Bothriochloa insculpta*, *Digitaria eriantha* and *Eragrostis tef*. The plants were planted in a plot of 1 m^2 in size by spreading the seeds and each species was replicated 3 times. Biomass production were calculated from the crop production on the first harvest and the second harvest (first regrowth). Plant morphology showed that all these plants had good development and growth data shows that all of these plants had good growth. The adaptability of the three varieties had good adaptability because it is free from pests and diseases. The first harvest of *Bothriochloa insculpta* produced 1.28 ± 0.25 tonnes/ha (DM 18.77 ± 0.74%; OM 85.30 ± 0.46%), the second production was 5.61 ± 3.01 tonnes/ha (DM 28.54 ± 2.47%; OM 87.54 ± 1.35%). The first harvest of *Digitaria eriantha* produced 2.15 ± 0.53 tonnes/ha (DM 15.91 ± 0.30%; OM 89.02 ± 2.68%), the second production was 8.66 ± 5.13 tonnes/ha (DM 28.75 ± 3.32%; OM 89.93 ± 0.90%). The first harvest of *Eragrostis tef* produced 0.55 ± 0.17 tonnes/ha (DM 20.37 ± 2.17%; OM 88.54 ± 1.06%), the second production was 0.65 ± 0.04 tonnes/ha (DM 24.85 ± 3.20%; OM 89.09 ± 0.86%). The results of the analysis showed that the highest production of the three plants is *Digitaria eriantha*'s production because of its better growth and adaptability.

Key word: *Bothriochloa insculpta*, *Digitaria eriantha, Eragrostis tef*, adaptability, morphology, biomass production