

KARAKTERISTIK MORFOLOGI DAN PRODUKSI BIOMASSA *Bothriochloa insculpta* cv. Bisset, *Cenchrus ciliaris* cv. Gayndah, *Setaria sphacelata* cv. Narok DI YOGYAKARTA

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui karakteristik morfologi, daya adaptasi serta produksi biomassa *Bothriochloa insculpta*, *Cenchrus ciliaris*, dan *Setaria sphacelata* yang diintroduksi di Yogyakarta, Indonesia. Materi yang digunakan adalah 3 jenis tanaman pakan introduksi dari perusahaan *Cropmark Seed* yaitu *Bothriochloa insculpta* cv. Bisset, *Cenchrus ciliaris* cv. Gayndah, dan *Setaria sphacelata* cv. Narok. Tanaman tersebut ditanam dalam plot ukuran 1 m² dengan cara disebar bijinya dengan 3 kali ulangan untuk masing-masing tanaman. Produksi biomassa diambil dari produksi panen ketiga (*regrowth* kedua) dan produksi panen keempat (*regrowth* ketiga). Metode analisis dalam penelitian dilakukan secara deskriptif untuk efek hasil penelitian. *Bothriochloa insculpta* cv. Bisset memiliki produksi biomassa 3,14 ton/ha/tahun pada *regrowth* kedua (kadar BK 16,78% dan kadar BO 88,73%) dan memiliki produksi biomassa 3,74 ton/ha/tahun pada *regrowth* ketiga (kadar BK 17,43% dan kadar BO 88,29%). *Cenchrus ciliaris* cv. Gayndah memiliki produksi biomassa 2,64 ton/ha/tahun pada *regrowth* kedua (kadar BK 15,83% dan kadar BO 87,60%) dan memiliki produksi biomassa 3,21 ton/ha/tahun pada *regrowth* ketiga (kadar BK 16,57% dan kadar BO 88,17%). *Setaria sphacelata* cv. Narok memiliki produksi biomassa 3,99 ton/ha/tahun pada *regrowth* kedua (kadar BK 17,56% dan kadar BO 87,30%) dan memiliki produksi biomassa 4,66 ton/ha/tahun pada *regrowth* ketiga (kadar BK 18,53% dan kadar BO 87,26%). Hasil analisis menunjukkan bahwa terdapat perbedaan yang nyata pada produksi biomassa hanya pada *regrowth* kedua ($P < 0,05$). Kesimpulan hasil penelitian yaitu *Setaria sphacelata* cv. Narok menjadi tanaman dengan produksi biomassa yang paling tinggi dari ketiga tanaman yang diujicoba.

Kata kunci : *Bothriochloa insculpta* cv. Bisset, *Cenchrus ciliaris* cv. Gayndah, dan *Setaria sphacelata* cv. Narok, *regrowth*, morfologi, produksi biomassa

**MORPHOLOGICAL CHARACTERISTICS AND BIOMASS
PRODUCTION OF *Bothriochloa insculpta* cv. Bisset,
Cenchrus ciliaris cv. Gayndah, *Setaria sphacelata*
cv. Narok IN YOGYAKARTA**

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ABSTRACT

This study was aimed to determine the morphological characteristics, and biomass production *Bothriochloa insculpta*, *Cenchrus ciliaris*, and *Setaria sphacelata* which were introduced in Yogyakarta, Indonesia. The material used was 3 types of introduced forages from the Cropmark Seed company, *Bothriochloa insculpta* cv. Bisset, *Cenchrus ciliaris* cv. Gayndah, and *Setaria sphacelata* cv. Narok. The plants were planted in a plot of 1 square meter in size by spreading the seeds and with 3 replication. Biomass production such as fresh production, dry matter (DM), and organic matter (OM) was collected from the third crop production (second regrowth) and fourth crop production (third regrowth). Collected data were descriptively for the effects of the research results. *Bothriochloa insculpta* cv. Bisset had a biomass production of 3.14 tons/ha/year in the second regrowth (DM content 16.78% and OM content 88.73%) while the biomass production in the third regrowth 3.74 tons/ha/year (DM content 17.43% and OM content 88.29%). *Cenchrus ciliaris* cv. Gayndah had a biomass production of 2.64 tons/ha/year in the second regrowth (DM content of 15.83% and OM content of 87.60%) and had biomass production of 3.21 tons/ha/year in the third regrowth (DM content of 16.57% and OM content 88.17%). *Setaria sphacelata* cv. Narok had a biomass production of 3.99 tons/ha/year in the second regrowth (DM content of 17.56% and OM content of 87.30%) and had a biomass production of 4.66 tons/ha/year in the third regrowth (DM content of 18.53% and OM content 87.26%). The studies showed that there were significant differences in biomass production only in the second regrowth ($P < 0.05$). The conclusion of the research was *Setaria sphacelata* cv. Narok is the plant with the highest biomass production from the three plants tested.

Keywords: *Bothriochloa insculpta* cv. Bisset, *Cenchrus ciliaris* cv. Gayndah, and *Setaria sphacelata* cv. Narok, regrowth, morphology, biomass production.